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<p>The focus of this project is on the biological evaluation of new, potentially useful antiviral agents for selective activity against HTV. This program involves (a) primary testing of approximately 1500 chemical compounds and/or natural products per year for anti-HTV efficacy <i>in vitro</i>; (b) further testing of compounds that test positive in the primary screen by immunofluorescence, p24 gag protein expression, syncytial inhibition, and virus reduction by reverse transcriptase assays; (c) examining the mechanism of antiviral action for compounds with activity against HTV; (d) secondary evaluation of the active candidate antiviral compounds against a series of animal retroviruses such as MuLV, STV, and FAIDS virus <i>in vitro</i>, and (e) determining the antiviral efficacy of candidate compounds in murine and simian retrovirus models <i>in vivo</i>. We have established efficient, reproducible, quantitative methods for rapid screening of antiviral compounds. A total of 214 compounds have been found active in two or more tests in the primary <i>in vitro</i> screen. Thirteen agents were found active against murine AIDS models <i>in vivo</i>. DDC and DDI showed good antiviral activity at very high concentrations. AZT plus DDC appeared to be more effective than treatment with either single agent.</p>			
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This NIAID/NIH-sponsored NCDDG/AIDS grant has been prematurely terminated as a result of a directive from USAMRDC to halt all retrovirus research within USAMRIID's laboratories. This action has been taken due to implementation of priority workspace at USAMRIID associated with Desert Storm.

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In conducting research using animals, the investigator(s) adhered to the "Guide for the Care and Use of Laboratory Animals," prepared by the Committee on Care and Use of Laboratory Animals of the Institute of Laboratory Animal Resources, National Research Council (NIH Publication No. 86-23, Revised 1985).

For the protection of human subjects, the investigator(s) have adhered to policies of applicable Federal Law 45CFR46.

In conducting research utilizing recombinant DNA technology, the investigator(s) adhered to current guidelines promulgated by the National Institutes of Health.

William Jr. Shannon  
PI Signature

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## I. INTRODUCTION

This is the Annual/Final Report on SRI Project No. 6520, Contract No. DAMD17-88-H-8003. It covers the progress of the research program during the reporting period from January 4, 1988 to April 30, 1991.

The focus of this project was on the biological evaluation of new, potentially useful antiviral agents for selective activity against HIV. The compounds for testing include synthetic chemical compounds and natural products submitted to USAMRIID for evaluation in this National Cooperative Drug Discovery Group Program. Our specific aims were to:

1. Evaluate newly synthesized compounds or natural products (approximately 1500 materials per year) for their ability to selectively inhibit the infectivity and cytopathic effect of HIV in cell culture assays. The assay systems for the primary screen included inhibition of HIV-induced cytopathic effect in CEM and MT-2 cell lines using an MTT assay method. Quantitative data was obtained via a custom designed software package.

Compounds that were active in primary assays were confirmed by quantitation of virus growth in culture. Supernatant samples were tested for reverse transcriptase activity, p24, and number of infectious particles in order to quantitate the effect of the active compound on virus replication.

2. Examine the mechanism of antiviral action for compounds with activity against HIV. Initially these studies included an examination of their ability to inhibit reverse transcriptase in *in vitro* reactions using the enzyme from HIV-1, AMV, and Moloney MuLV with a synthetic homopolymer-template primer. During the last year of the contract, selected compounds were examined for their ability to inhibit only HIV-1 reverse transcriptase in an assay using ribosomal RNA as the template.

3. Provide useful information to the chemists with regard to structure-activity relationships and mechanism of action of compounds with anti-HIV activity to guide new synthetic efforts.

4. Determine the antiviral efficacy of candidate compounds, with demonstrated activity against HIV *in vitro*, against animal retroviruses, such as MuLV, SIV and FAlDS, *in vivo*. These data served to provide information on compounds that might be selected for further studies in animal models for retrovirus infection.

5. Determine the antiviral efficacy of candidate compounds in two murine models of retroviral disease: the LP-BM-5 virus mixture in adult C57BL/6 mice and the Rauscher leukemia virus in adult BALB/c. Viremia (quantitated in a UV-XC plaque assay), reverse transcriptase levels, and IgM levels (by ELISA) were measured in serum samples and animal and spleen weights taken. Agents that showed activity in these assay systems were further evaluated by monitoring various components of the immune system, including T-lymphocyte function, natural killer activity, and macrophage activation.

6. Determine the antiviral efficacy of candidate compounds in the simian model of retroviral disease.

This report summarizes our progress in implementing this research program and includes summaries of antiviral test data collected through April 30, 1991.

## II. EXPERIMENTAL METHODS

### A. Drug Acquisition, Scheduling, Distribution and Drug Preparation

Drug preparation for the HIV laboratory was initiated January 16, 1989. From January 16, 1989 through April 30, 1991, 4600 AVS samples have been prepared (this includes retest and positive control samples). The drug samples submitted for testing in the HIV system were shipped to the centralized drug preparation laboratory by Biological Research Faculty and Facility, Inc. (BRFF). The drugs were checked against the enclosed shipping list, and stored in numerical order in the drug repository facility under the appropriate conditions, according to the information supplied by BRFF.

If drug solubility information was included on the drug data sheet, then that information was used. If necessary, the solubility of a drug was determined by the following method. A 1-mg sample was weighed, placed in a homogenizer vessel, and the first solvent on the priority list was added. If the drug did not dissolve in the solvent, it was heated to 40 °C (unless it was known to be heat-unstable). If the drug was not in solution after heating, it was homogenized with a hand homogenizer. If the drug still was not in solution, another sample was weighed and this procedure used with the next solvent on the priority list. The priority list of solvents and the volume used to dissolve the 1-mg sample was as follows: H<sub>2</sub>O (1ml), MeOH, EtOH, DMSO, or acetone (0.1 ml). If the drug is insoluble in all of the above listed solvents, it is to be tested as a suspension in cell culture assay medium with the aid of a hand homogenizer or a vortex mixer. The final concentration of solvent in the starting drug concentration should not exceed 1% (preferably < 1%).

Requests for drug preparation were delivered to the centralized drug preparation laboratory five working days prior to the testing date (see Figure 1 for the drug request form). The drugs were solubilized and delivered to the HIV laboratory on the day of testing. All drugs were weighed in 5 mg amounts. If the drug was H<sub>2</sub>O soluble, 2.5 ml H<sub>2</sub>O was added to the 5 mg sample resulting in a concentration of 2 mg/ml. If the drug was soluble in any other solvent, then 0.125 ml of the solvent was added to the 5 mg sample resulting in a concentration of 40 mg/ml. Polystyrene snap-cap tubes were used for the weighed samples except for acetone-soluble drugs, then polypropylene tubes were used.

Drug preparation for the Reverse Transcriptase (RT) laboratory was initiated February 27, 1989. From February 27, 1989 through April 30, 1991, 138 AVS samples have been weighed and delivered to the RT laboratory (the drugs are not solubilized in the drug preparation laboratory). The drug samples submitted for testing in the RT system were shipped to the centralized drug preparation laboratory by BRFF, designated with an "A" suffix per shipment (eg. Shipment 1A). Water soluble drugs were dissolved at either 1 mg/ml or 0.5 mg/ml in 10% water on the day of the initial assay. DMSO soluble drugs were dissolved at 5.0 mg/ml in DMSO, diluted with assay buffer on the day of the initial assay to 0.2 mg/ml (5% in DMSO). Vortexing or sonicating the solution may be used to solubilize the compound. If needed, the solution may be heated. The drug solution was then diluted as needed with assay buffer. The DMSO soluble compounds were diluted with assay buffer containing sufficient DMSO to give the appropriate drug concentration in 5% DMSO.

## **DRUG REQUEST FORM**

Project No. \_\_\_\_\_ Requested By \_\_\_\_\_  
Date of Request \_\_\_\_\_ Date Request Received \_\_\_\_\_  
Date to be Tested \_\_\_\_\_ Drugs Prepared by \_\_\_\_\_  
Date Delivered \_\_\_\_\_ Received By \_\_\_\_\_

WHITE, YELLOW AND BLUE COPY TO PREP LAB  
PINK COPY TO ORIGINATOR

**Drug Preparation Request Form**

四

**Figure 1**

## **B. Primary Screens**

SRI conducted the primary screening of chemical compounds which were furnished by the Department of Antiviral Studies, USAMRIID, through its repository contractor (Biologic Research Faculty and Facility, Inc., Frederick, MD) for antiviral efficacy in cell culture against HIV. SRI was scheduled to evaluate approximately 1500 compounds per year. All screening data were reported to Maxima, Inc. and to USAMRIID essentially as it was obtained in hardcopy form or on floppy diskettes.

### **1. Standard Screening Assay In CEM And MT-2 Cells**

#### **a. Compound dilution and delivery to the plates**

Drugs were solubilized in the appropriate vehicle such as distilled water, DMSO, methyl alcohol, or any other vehicle as requested by the Project Officer or as determined at SRI. The maximum solubility was determined as appropriate. Latex gloves, lab coats, and masks were used during all phases of the handling process to prevent exposure to potentially harmful agents. At highest solubility, the drug was prepared and stored at -20°C until used by the screening laboratory. The first dilution of each compound was made in a dilution tube with medium to yield a concentration two-fold that of the highest test concentration. Sterile titer tubes were then used to make serial one half log dilutions of each compound. Following drug dilution, the diluted compound was added to the appropriate well of a 96-well microtiter plate. Up to 12 dilutions could conveniently assayed in triplicate on a single plate with all appropriate controls, including cell control, virus control, toxicity control, drug color control, medium control and plastic (background) control. When testing included only six dilutions, two drugs could be assayed on a single microtiter plate. The drugs were added to the plate in a final volume of 100 microliters.

#### **b. Cells and virus**

During the time that the drug dilutions were prepared, cells were washed and counted. Viability was monitored by trypan blue dye exclusion and assays were not performed if the viability fell below 90%. Cells were maintained in an exponential growth phase and were split 1:2 on the day prior to assay to assure exponential growth rate. For the primary screen, the cell lines utilized were CEM and MT-2. Unless otherwise indicated the medium used was phenol red-free RPMI 1640 with 10% heat-inactivated fetal calf serum (FBS), glutamine and antibiotics. Cells were propagated at 37°C in an atmosphere of 5% CO<sub>2</sub> in air. The virus employed for this work was HIV-1 isolates IIIB and/or RF prepared by an acute infection process, Buckheit, et al., (1991) and Cloyd, et al., (1990). Briefly, virus infected cells were pelleted on a daily basis beginning at three days post-infection until the virus had killed all of the cells in the culture. Reverse transcriptase activity and p24 ELISA were used to identify pools with the greatest amount of virus. These 24-hour harvests were pooled, filtered and frozen at -90°C. Prior to use in the assay the infectious pool of virus was titrated on all available cell lines in order to determine the amount of virus required in the anti-viral assay. In general, pools produced by the acute virus method required the addition of one microliter of infectious virus per well resulting in the screening of drugs at a multiplicity of infection of 0.01. In this manner enough virus was prepared and frozen to complete over one thousand microtiter plates, allowing the testing of up to two thousand compounds from a single stock of infectious virus. The use of a single stock of virus for a long period of testing has very favorable effects on the repeatability of the assay systems. Virus infection of the CEM cells was carried in a bulk infection process. The appropriate number of cells required to complete the assay were mixed with infectious virus in a conical centrifuge tube in a small total volume of 1 - 2 milliliters. Following a one hour incubation the infected cells were brought to the appropriate final concentration of  $5 \times 10^3$  cells per milliliter with fresh tissue culture medium and 100 microliters were added to the appropriate experimental and virus control wells. Uninfected cells at the same concentration were plated for the toxicity controls and for the cell controls. Assays could also be performed using individual infection methods. In this case, drug, cells and virus were added to the well individually. In each case the MOI was adjusted to give complete cell killing in the virus control wells by day 6.

c. Evaluation of CPE-inhibition

Following the addition of cells and drugs to the microtiter plate the plate was incubated for 6 days at 37°C. Experience had determined that incubation for longer periods of time (7 - 8 days) or the use of higher input cell numbers ( $1 \times 10^4$ ) resulted in significant decreases in cell control viability and a narrowing in the differential in optical density between cell and virus controls upon staining with MTT.

The method of evaluating the antiviral assay involved the addition of 20 microliters of the tetrazolium salt MTT at 5 mg/ml to each well of the plate for 4 - 8 hours. After this incubation period the cells were disrupted by the addition of 50  $\mu$ l of 20% SDS in 0.01N HCl. The metabolic activity of the viable cells in the culture resulted in a colored reaction product which was measured spectrophotometrically in a Molecular Devices Vmax plate reader at 570nm. The optical density (O.D.) value was a function of the amount of formazan product, which is proportional to the number of viable cells. The plate reader was on-line to the screening laboratory microcomputer which evaluates the plate data and calculates plate data. The plate report provided a rundown of all pertinent information including the raw O.D. values, the calculated mean O.D.'s and the percent reduction in viral CPE as well as calculations including  $TC_{50}$ ,  $IC_{50}$  and antiviral and specificity indices. Finally, the results included a plot which visually depicts the effect of the compound on uninfected cells (toxicity) and the protective or nonprotective effect of the compound on the infected cells. A representative example of a plate report is given in Figure 2.

d. Interpretation of results and quality control

The results shown for AZT (Figure 2) illustrate a frequently observed pattern for an active compound. At the concentrations tested (6 one-half log dilutions), the highest concentration of AZT (2.67  $\mu$ g/ml) is always toxic as shown by the low O.D. values for both uninfected and infected cells (see mean O.D. results, TC results, and the plot). The next three successive dilutions of AZT show 100% protection. At AZT concentrations below 0.0834  $\mu$ g/ml the level of protection decreases while the toxicity to uninfected cells shows no toxic effect of AZT. Patterns similar to this are recognized as active.

A drug could have much more or much less toxicity, and the uninfected and infected curves must always coincide at the toxic concentrations. Those that did not were considered unsatisfactory and were retested. A drug could be active at one concentration or across a range of concentrations. However, if it was active at a given concentration it must be active at all higher concentrations unless those concentrations were toxic. When apparent activity at one concentration was lost at a higher non-toxic concentration, that pattern was not recognized as meaningful and a repeat was performed. Generally, a valid test was one in which the virus control and cell control values differed by a significant margin. When they did not, the cause could be poor viral infectivity or poor cell growth. In these cases, assays were judged unsatisfactory. Assays were also suspect when there was widespread non-agreement between duplicate wells, when contamination occurred at key doses, and when background was not consistent with that expected.

A compound was judged inactive when no recognized pattern of protection was observed in an otherwise valid assay. When a low level of activity was observed the compound was considered possibly active and was rescheduled for testing. Protection at only high doses of the drug or low level activity across a range was not a mark of a particularly useful drug, but the information was valuable from the standpoint of the development of possible analogs of that compound and the structure of compounds with activity.

PLATE 000  
DRUG A/T

## IN VITRO ANTIVIRAL RESULTS XTT ASSAY

DRUG: AZT  
TAU: >76.45 SI: 111.80

	1	2	3	4	5	6	7	8	9	10	11	12
	negative background						positive background					
A	0.113	0.110	0.107	0.103	0.103	0.100	0.025	0.026	0.026	0.025	0.025	0.026
B	1.168	1.179	0.322	0.347	0.323	1.235						1.089
C	1.198	1.150	0.945	0.964	0.853	1.382						1.047
D	1.210	1.154	1.099	1.031	1.161	1.508						1.040
E	1.172	0.137	1.151	1.139	1.273	1.413						0.131
F	1.151	0.136	1.145	1.191	1.088	1.220						0.219
G	0.515	0.142	0.496	0.544	0.562	0.578						0.118
H	drug AZT ascorbic acid background											
	0.109	0.103	0.100	0.103	0.103	0.104						

## VIRUS CELLS

HIV Satisfactory: Active: Retest

PROJECT # 615  
SPONSOR B. BUCKHEIT

578

70 1-13

TEST DATE	12/15/89
DATE READ	12/21/89

REAGENTS

0.106

524 84

VIRUS

8.100

347

**VIRUS CONTROL**  
**CELL CONTROL**

0.025

2.47 2.87  
2.47 2.87

卷之三

1.000

2.61

## DIFFERENTIAL

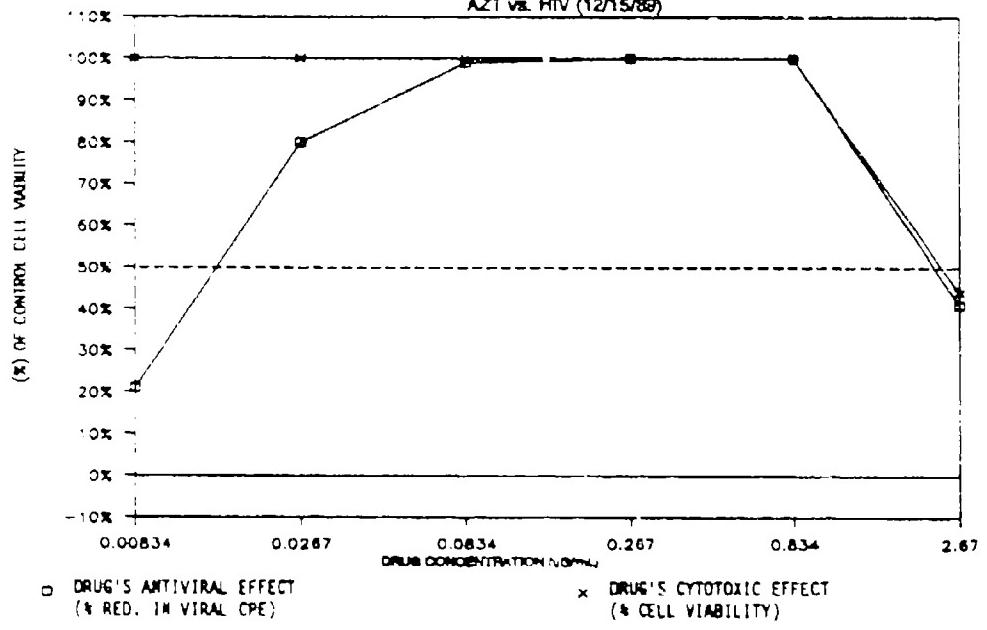
0.979

**167.35** > **40.68**

DRUG A2		ANTIVIRAL TEST VALUES			CYTOTOXICITY TEST VALUES			COLORIMETRIC CONTROL
ROW OR PLATE	CONC. ( $\mu$ G/mL)	MEAN C.D.	% RED. IN VIRAL CPE	MEAN O.D.	% CELL VIABILITY			
B	0.00834	0.202	21%	1.098	100%			- .002
C	0.0267	0.786	80%	1.187	100%			- .003
D	0.0834	0.970	99%	1.256	100%			- .003
E	0.267	1.063	100%	1.192	100%			- .006
F	0.834	1.014	100%	1.083	100%			- .003
AFTER G	2.67	0.401	41%	0.438	44%			0.003

## SUMMARY GRAPH

AZT vs. HTV (12/15/89)



## Example of Primary Screening Report (AZT)

**Figure 2**

### C. Confirmatory Screens

Drugs which demonstrate activity in the original screen were immediately scheduled for a second primary assay under the same conditions in order to confirm the results of the first test. If a drug was confirmed to be active in the second testing by the MTT assay additional information was collected to further verify the antiviral activity. Prior to the addition of MTT to the wells of the assay plate a 20 microliter sample was obtained. This sample of cell-free supernatant was tested for reverse transcriptase activity, p24 reactive material by ELISA, and infectious particle quantitation by syncytial assay. These assays were performed as follows:

#### 1. Reverse Transcriptase Assays

Reverse Transcriptase Assays, Hoffman, et al., (1985), were performed by mixing 15 microliters of supernatant with 10 microliters of RT reaction mixture. This reaction mixture contained (final concentrations) 10mM Tris, 10mM dithiothreitol, 8mM magnesium chloride, 0.5% triton X-100, 50ng/ml poly (rA), 10mg/ml oligo dT, and 2.5  $\mu$ Ci of tritiated thymidine triphosphate. The reactions were performed in a 96-well plate at 37°C for 90 minutes. The reaction mixture was then spotted onto DE81 chromatography paper and washed extensively in 5% sodium phosphate buffer, distilled water and 100% ethanol. After drying, a toluene based fluor was added and the amount of incorporated radioactivity quantitated and compared with the level incorporated by the cell and virus control wells. A positive and negative control virus supernatant was also included to standardize daily RT assays and allow comparisons of results obtained in different days.

#### 2. p24 ELISA

p24 ELISA was performed according to the manufacturers recommendations utilizing cell free supernatant. ELISA was usually performed following RT assay to permit optimal dilution of the samples obtained so they could be quantitated in the range of sensitivity of the kit. Usually, the virus control sample required a 1:20,000 dilution prior to assay whereas a negative sample required only 1:100. Performance of RT assays prior to ELISA allowed dilutions along the curve of anti-viral activity to be accurately determined and avoided off-scale quantitation saving time and money. Standard curves for this analysis have been determined.

#### 3. Infectious Particles

Infectious particles were quantitated utilizing CEM-SS cells (61). Plates were coated with poly-L-lysine and CEM-SS cells were placed in the well where they were fixed to the bottom of the plate. Virus was added in serial dilutions and the number of syncytia were quantitated at 4 days following infection.

#### 4. Dot Blot RNA Hybridization

Dot blot RNA hybridization was utilized for further confirmation of the activity of certain compounds could be performed by determining the inhibition of HIV-1 RNA production. CEM cells were infected as described above and triplicate cultures were treated with the active concentrations of the test compound, as determined by the primary screening. Appropriate virus and cell controls were included and all cultures were maintained at 37°C in the presence of 5% CO<sub>2</sub> moisture and air. At day 6 post-infection, cultures of infected and uninfected cells were pelleted and processed for dot-blot hybridization assay. RNA were extracted from cell lysates using the chaotropic buffer quanidone thiocyanate (GuCN). Extracted RNA from the individual specimens was mixed with poly (dA) oligomer capture probe and a [<sup>125</sup>I] CMP labeled HIV-POL RNA detector probe. Viral nucleic acid target probe complexes bound to or were captured by oligo (dT) magnetic particles and repeatedly cycled by washing, eluting and recapturing, effectively reducing non-specific background. Detection of the target complexes

was accomplished by immobilizing the hybridization mixture on a nitrocellulose membrane for autoradiography. For quantitative purposes the autoradiograph was scanned using a densitometer and the amount of HIV-1 RNA present in each specimen was quantified relative to standard amount of RNA added to uninfected CEM cells.

#### D. Secondary Screens

Following confirmation of the activity of the active compound additional testing was performed. These tests included the use of other human T, B, or macrophage-monocyte cell lines to quantitate the range of action of the compound. Additional testing also included pre- or post-treatment of cells with therapeutic compounds with respect to virus infection. Finally, mechanism of action studies could be performed as described in detail below.

##### 1. Syncytial Assays

The ability of compounds to inhibit syncytia formation was evaluated in a microtiter assay system. Uninfected CEM cells were placed in wells of a 96-well microtiter plate at  $1 \times 10^5$  cells per well. Chronically infected CEM cells (CEM-HIV) were added at one-half log dilutions from  $10^5$  to  $10^2$  cells per well. Drug was added at appropriate concentrations and the number of syncytia was quantitated at 24 hours post-mixing. In these assays syncytium formation was first detected at 6 hours post-infection and continued through 48 hours post-cocultivation.

##### 2. Variation In Multiplicity Of Infection

The protective ability of an active compound was tested at different multiplicities of infections. MOI were varied to test at low, intermediate, and high levels of virus input. AZT and ddC were utilized as control test compounds.

##### 3. Variation In Time Of Drug Addition

Compounds were added prior to, during and following virus infection to investigate the optimal time of drug addition. We routinely added compound at 24, 12, 6 and 2 hours pre-infection and 2, 4, 8, 12, 24, 48 and 72 hours post-infection. Drug addition at the time of infection was utilized as the relative control sample. AZT and ddC were used as control test compounds.

##### 4. HIV Isolates

We have available at SRI a wide panel of HIV-1 isolates for use in our screening operations. These isolates include the commonly used isolates of HIV-1 (IIIB, RF, LAV, MN and WM1) as well as a panel of isolates from ARC patients obtained at Duke University and used in the research program of Dr. Robert Buckheit. The biological and biochemical properties of these isolates are the subject of several publications and further characterization is ongoing. Buckheit, *et al.* (1991) and Cloyd, *et al.* (1990). The acute infection method employed for producing these pools of virus has been described above. Our assay systems will also include a panel of AZT resistant mutants which have been obtained from the AIDS Repository. These isolate will be a routine part of our screening efforts in a short period of time. We also have recently added two isolates of HIV-2 isolate to our standard screens and are in the process of securing other diverse isolates of HIV-2 in order to improve our screening panel. This panel of isolates will demonstrate the ability of a compound to act against a diverse group of HIV-1 isolates and will provide information regarding activity of a compound against the related HIV-2. We will also attempt to isolate mutant HIV isolates *in vitro* with resistance to selected therapeutic agents and then document the changes in nucleotide sequence and biological phenotype which resulted in this change of drug sensitivity. Mutants will be isolated by growth in medium with an optimal concentration of active

compound and repeated isolation of virus and reinfection. Any viruses produced in this manner will be biologically cloned by limiting dilution techniques and analyzed in our primary and confirmatory assays for drug resistance. Cross-resistance to other therapeutic agents will also be analyzed.

#### 5. Antiviral Evaluations In Fresh Lymphocytes And Macrophages

Assays in fresh peripheral blood lymphocytes and fresh human macrophage cultures were performed as needed to confirm and expand results obtained by our collaborators at Vanderbilt University.

#### 6. Acute And Chronic Infections

We primarily measured the therapeutic efficacy of drugs in acute infections by the standard MTT assay system described above. We also used larger cell culture systems to more accurately describe the cellular and virologic effects of therapy on the kinetics of HIV infection. In these assays, CEM cells were placed in a microtiter well at  $2.5 \times 10^5$  cells/well and infected with 100  $\mu$ l virus at an appropriate previously determined multiplicity of infection. The infection proceeds for one hour at 37°C at which point the cells were resuspended and placed in a T25 tissue culture flask in 1.0 ml of tissue culture medium. Fresh media was added daily until a 10.0 ml of medium. Cells or supernatant were utilized at various timepoints (usually on a daily basis) and used for quantitation of infection kinetics. This quantitation involved total cell and viability counting, cellular proliferative rate measurement by thymidine incorporation or propidium iodide staining, and measures of virus growth, including reverse transcriptase, p24 ELISA, infectious titer and Western, Northern, and Southern immunoblotting. These assays were performed on intracellular and extracellular sources of virus or virus protein and additional assays could be performed on specified subcellular compartments. The performance of these assays will be described in detail below.

We also performed numerous assays to examine the effect of agents on chronically infected cells. Measurement of the number of cells in a chronically infected culture which express envelope glycoprotein or which were determined to be infected by syncytia assay suggests that only 10 - 40% of the cells in the culture were infected. We performed experiments which indicated that all of the cells in the culture were indeed infected but not all expressed detectable envelope glycoprotein. These assays attempted to allow any uninfected population to grow out in the presence of AZT; however, no uninfected cells were ever detected. These cells appeared to be a sensitive assay to detect agents which have cytotoxic activity against infected cells or agents which inhibited ongoing virus production. Agents which acted early in the infection process such as RT inhibitors had no effect on chronically infected cells. Chronically infected cells could be used in microtiter systems or large scale cell culture. Our assays included RT activity and p24 ELISA analysis on the supernatants to detect reductions in virus production and Northern, Western and p24 ELISA analysis of the cells to examine changes in virus transcription and translation. Various probes or monoclonal antibodies could be used in the Northern and Western analysis to examine changes in the production of viral structural or regulatory components. These same assays could be performed in T25 flasks to increase the scale of the assay in order to detect RNA or protein which are expressed at low level. Once again, details of these specific assays are described below. We also have available the U1 cell line which we obtained through the AIDS Repository which is a cloned chronically infected U937 cell line and has been in assays involving the induction of virus production from latently infected cells. The U1 line was used to complement studies performed on chronically infected T cell lines such as CEM or MT-2.

## **7. Cellular Assays**

In addition to endpoint measurements involving the quantitation of virus in the cell-free supernatants assays could be performed to quantitate effects on cells. These assays could include the following: (1) The FACS analysis of viral envelope glycoprotein or cell surface protein such as CD4, CD8, or other lineage or histocompatibility markers was performed on cells prior to total cell killing. The timepoint selected for optimal FACS analysis was determined. Cells were incubated with the appropriate monoclonal antibody in a buffer of PBS containing 2% FCS and 0.1% EDTA for 30 minutes, washed extensively, and then incubated with FITC-conjugated second stage antibodies. Following washing, the cells were analyzed on an EPICS FACS machine. (2) Cells could also be examined immunofluorescently for intracellular p24 antigen expression. Cells were air dried on slides and fixed with cold acetone prior to staining as described above. The percentage of immunofluorescent cells was quantitated on a Zeiss fluorescent microscope in the microscopy/photography suite in the P-3 facility. (3) Syncytia assays could be performed by transferring the cells to a 96-well plate at various half log dilutions and incubation with an indicator cell line as described above. The quantitation of syncytia, or syncytia forming units, allowed quantitation of the percentage of cells in each well which were capable of initiating syncytia formation. (4) Viability counts could be used to confirm killing as measured by MTT staining. (5) A cell-based hybridization assay was performed to sensitively detect cells which were infected with viroids and producing HIV. This assay was similar to *in situ* hybridization assays and was optimized using nonradioactive sources of hybridization.

## **8. Feline Leukemia Virus (FeLV) - FAIDS Variant**

We obtained our initial stock of Feline Leukemia Virus, FAIDS variant from Dr. Ed Hoover of Colorado State University.

Following the procedure for growing stock virus established by Dr. Hoover, feline embryonic fibroblasts, AH-927 (Dr. Hoover), were grown in Eagle's minimum essential medium containing 10% heat inactivated fetal bovine serum (FBS) and 1% non-essential amino acids. Twenty-four hours prior to infecting with virus, the cells were subcultured at a ratio of 1:4 and 0.2 ml of polybrene (2 mg/ml stock) was added for each 100 ml growth medium. On the day of infection, the growth medium was removed and the cells were washed twice with phosphate buffered saline (PBS). The virus inoculum was allowed to adsorb for 1 hour at 37°C. The virus inoculum was removed, the cells washed twice with PBS, and then a minimal volume of growth medium containing polybrene was added. After five days incubation the culture fluid was collected and clarified by centrifugation (5000 rpm x 15 min). The supernate was dispensed into 1.0-ml aliquots, frozen, and then stored at -120°C. One aliquot was used to determine the TCID<sub>50</sub> and the focus forming unit (FFU) titers of the stock.

Antiviral screening of compounds for activity against FeLV-FAIDS was performed in 96-well trays (Corning). This screening procedure is a modification of the FeLV infectivity assay established by Fischinger *et al.*, (1974). Forty-eight hours prior to the assay, the indicator cells, 81C (obtained from D. Graves, University of Oklahoma, Oklahoma City, OK) were subcultured at a ratio of 1:2. Twenty hours prior to the assay, 96-well trays were seeded with the 81C cells at  $5 \times 10^3$  cells/well. On the day of the assay, the cells were pretreated for 30 minutes at 37°C with DEAE-dextran (25 µg/ml) in 0.1 ml Hanks balanced salt solution. This was removed and then 0.1 ml of growth medium containing 32 TCID<sub>50</sub> of FeLV-FAIDS, or 0.1 ml of growth medium alone, was added to each well. The virus was

allowed to adsorb for 1 hour, then 0.1 ml of test or control compound (ddC or AZT), or growth medium was added. Plates were incubated at 37°C. Cells were fed fresh growth medium containing compound on Day 4 post-infection. Culture media were completely changed and replaced with fresh media containing compound on Day 7 post-infection. On Day 10 post-infection the cells were fixed by addition of 100 µl buffered formalin for at least 1 hr at room temperature. All liquid was then removed and then the cells were stained with 0.1% Coomassie Brilliant Blue R-250. The plates were rinsed with deionized water, allowed to dry, and then observed microscopically for CPE and drug cytotoxicity.

#### 9. Simian Retrovirus - SAIDS (SRV-2)

We received from Dr. Che-Chung Tsai (Washington Regional Primate Research Center) one T-25 flask and one 15 ml tube of a co-culture of Raji cells infected with a simian type D retrovirus (SRV-2) isolated from a macaque with SAIDS at the Washington Regional Primate Research Center. Subsequently, we purchased uninfected Raji cells (CCL-86) from the ATCC for the purpose of making fresh co-cultures with which to propagate the virus. These cells were successfully grown in Iscove's Modified Dulbecco's Medium containing 15% FBS (complete Iscove's). The cells were subcultured every three days by a split ratio of 1:3. This yielded approximately  $3.5 \times 10^5$  cells/ml.

Co-cultures of normal Raji cells and Raji cells infected with SRV-2 were also maintained in complete Iscove's. These cells were subcultured every three days by a split ratio of 1:3 (yield =  $3.5 \times 10^5$  cells/ml). Raji cells and infected co-cultures were maintained regularly. Fresh co-cultures were routinely set up according to the procedure provided by Dr. Che-Chung Tsai. Briefly, 1 ml of 8 ml of an actively growing co-culture was added to a T-25 flask containing 8 ml of complete Iscove's medium to which 0.5 ml of actively growing Raji cells had been added. This new co-culture was incubated at 37°C with 5% CO<sub>2</sub> with the flask in an upright position.

The antiviral screening of compounds against the SAIDS virus was performed by a syncytia-inhibition assay on Raji cells. Compounds were diluted in complete Iscove's medium and then 100 µl of each dilution was added to the appropriate wells of a 96-well plate. Actively growing Raji cells,  $5 \times 10^3$  cells in 50 µl of complete Iscove's medium, were then added to each well. This was followed by the addition of 50 µl of clarified supernate from an SRV-2/Raji cell co-culture. Plates were incubated at 37°C in a humidified atmosphere containing 5% CO<sub>2</sub>. Syncytia were counted on Day 7 post-infection. Drug toxicities were ascertained by comparing viable cell counts of uninfected, drug-treated samples to the viabilities of uninfected, untreated controls.

#### 10. Murine Leukemia Virus (Rauscher)

Falcon 6-well tissue culture plates were seeded with  $1.75 \times 10^5$  SC-1 cells in 2.5 ml Eagle's minimum essential medium (EMEM) supplemented with 5% heat-inactivated FBS. On the following day the cultures were inoculated with 0.5 ml of a suspension of stock virus, at a dilution which produced a countable number of plaques per well, and 2.0 ml of the appropriate dilution of drug. Cell control cultures were refed with 2.5 ml medium and the virus control cultures received 0.5 ml virus suspension plus 2.0 ml medium. On Day 3 post-virus inoculation, the cultures were irradiated with an ultraviolet germicidal lamp for 20 seconds at a distance of 27.6 cm. Immediately after irradiation,  $5 \times 10^3$  XC cells were added in 2.5 ml EMEM + 10% heat-inactivated FBS. On Day 3 post-UV-irradiation, the cultures were fixed with formalin and stained with crystal violet. The plaques were counted with the aid of a dissection microscope.

Antiviral activity was expressed in terms of the reduction in the mean number of plaques counted in the drug-treated virus-infected cultures compared with the mean number of plaques counted in the

untreated virus-infected control cultures. The drug concentration which reduced the mean plaque number by 50% ( $ID_{50}$ ) was calculated using a regression analysis program for semi-log curve fitting and was expressed as  $\mu\text{g}/\text{ml}$ . The therapeutic index (TI) was determined by dividing the minimum toxic concentration (MTC) by the  $ID_{50}$ .

Drug toxicity was measured by the MTT dye conversion assay. SC-1 cells were seeded into 96-well tissue culture plates at a concentration of  $6.0 \times 10^3$  cells per well in  $0.2 \text{ ml EMEM} + 5\%$  heat-inactivated FBS. The following day the cell control cultures were refed with  $100 \mu\text{l}$  fresh medium. Drug toxicity cultures and drug color controls received  $20 \mu\text{l}$  medium +  $80 \mu\text{l}$  of the appropriate drug dilution. On Day 3 after addition of drug,  $50 \mu\text{l}$  of a solution containing  $2 \text{ mg/ml MTT}$  in  $\text{EMEM} + 5\% \text{ FBS}$  was added per well. Seven hours later  $100 \mu\text{l}$  of  $10\% \text{ SDS}:0.01\text{N HCl}$  was added per well. The cultures were incubated overnight; and the optical density (O.D.) read the following day at  $570 \text{ nm}$  on a Perkin-Elmer lambda plate reader.

#### E. Mechanism of Action

##### 1. $ID_{50}$ For Reverse Transcriptase

The following compounds were obtained from the indicated sources: leupeptin, pepstatin, and ribosomal RNA (16 S and 23 S) from *E. coli* MRE 600, Boehringer Mannheim Chemicals; poly(rA)\*p(dT)<sub>12-18</sub>, 2'-deoxythymidine 5'-triphosphate sodium salt (dTTP), 2'-deoxyguanosine 5'-triphosphate sodium salt (dGTP), 2'-deoxyadenosine 5'-triphosphate sodium salt (dATP), 2'-deoxycytidine 5'-triphosphate sodium salt (dCTP), and 2',3'-dideoxythymidine 5'-triphosphate sodium salt (ddTTP), Pharmacia; DNA primer (TAACCTTGCGGCCGT), Genetic Designs, Inc.; Triton X-100 (Surfact-Amps X-100 10% solution), Pierce; and [ $\text{methyl-}^{3}\text{H}$ ]-deoxythymidine 5'-triphosphate tetrasodium salt in Tricine buffer (100 Ci/mmol), NEN Research Products. Avian Myeloblastosis Virus (AMV) reverse transcriptase was purchased from Bio-Rad Laboratories and Moloney Murine Leukemia Virus (MuLV) reverse transcriptase from Bethesda Research Laboratories.

Prior to April of 1990, HIV-1 reverse transcriptase stocks were prepared in the following manner. Initially, H<sub>9</sub> or CEM cells infected with the HTLV-IIIB strain of HIV-1 were used. The infected cells were grown in media for at least three days. The cells were removed by low speed centrifugation and virus pelleted from the clarified supernatant by centrifugation at  $16,000 \times g$  for 2 hours at  $4^\circ\text{C}$ . The virus pellet was resuspended in 1/10th of the initial supernatant volume in  $10 \text{ mM Tris-HCl}$  (pH 7.8),  $1 \text{ mM ethylenediaminetetraacetic acid (EDTA)}$ ,  $200 \text{ mM KCl}$ ,  $10 \text{ mM } \beta\text{-mercaptoethanol}$ ,  $3 \mu\text{M}$  leupeptin, and  $0.5\%$  Triton X-100, dispersed by vortexing, and kept at room temperature for 1 hour to ensure complete disruption of the virus coat. Glycerol was added to the sample to make it 30% in that reagent and the sample stored at  $-20^\circ\text{C}$ .

A stock of Rauscher MuLV reverse transcriptase was prepared from cell-free culture medium which contained only the Rauscher MuLV and none of the spleen focus-forming virus (SFVV). The virus pellet was resuspended in 1/10th of the initial supernatant volume in  $40 \text{ mM Tris-HCl}$  (pH 7.8),  $0.2\%$  Triton X-100,  $20 \text{ mM } \beta\text{-mercaptoethanol}$ ,  $6 \mu\text{M}$  leupeptin,  $400 \text{ mM KCl}$ , and  $2 \text{ mM EDTA}$  and dispersed by vortexing. Glycerol was added to the sample to make it 30% in that reagent and the sample stored at  $-20^\circ\text{C}$ .

After April of 1990, partially purified stocks of HIV-1 or HIV-2 reverse transcriptases were used in the mechanism of action studies. CEM cells were infected with either a strain of HIV-1 that produces high extracellular levels of reverse transcriptase (SK1 strain) or the ROD isolate of HIV-2. The virus

was pelleted from cell-free supernatant by centrifugation and resuspended in 10 mM Tris-HCl (pH 7.8), 1 mM EDTA, 200 mM KCl, 10 mM  $\beta$ -mercaptoethanol, 1  $\mu$ M pepstatin, 3  $\mu$ M leupeptin, and 0.5% Triton X-100. The HIV-1 reverse transcriptase was purified on a single-strand DNA cellulose column equilibrated in 25 mM potassium phosphate (pH 7.4), 10% glycerol, 1 mM phenylmethylsulfonyl fluoride (PMSF), and 10 mM  $\beta$ -mercaptoethanol. Reverse transcriptase was eluted from the column with a 0-1 N KCl gradient. The column was monitored by measuring reverse transcriptase activity, single strand DNA nuclease activity, and terminal transferase activity. (Protein could not be detected by either measuring absorbance at 280 nm or by Bio-Rad's microprotein method.) Fractions from the ascending portion of the reverse transcriptase activity curve (which were essentially free of nuclease activity and free of terminal transferase activity) were pooled. The HIV-2 reverse transcriptase was purified by a two step procedure. The cell-free viral pellet was applied to a Blue-Sepharose column equilibrated with buffer containing 25 mM Tris-HCl (pH 7.4), 10% glycerol, 1 mM PMSF, and 10 mM  $\beta$ -mercaptoethanol. The reverse transcriptase was eluted by a gradient of 0.2 to 1.0 N KCl. Fractions containing HIV-2 reverse transcriptase activity greater than 500,000 dpm's/10  $\mu$ l were pooled and, after dialysis to remove salt, applied to a Affi-Gel Heparin column equilibrated in 25 mM potassium phosphate buffer (pH 7.4), 10% glycerol, 1 mM PMSF, and 10 mM  $\beta$ -mercaptoethanol. The reverse transcriptase was eluted with a gradient from 0 to 0.8 N KCl. This purification procedure gives a pool of HIV-2 reverse transcriptase free of contaminating nuclease and terminal transferase activity. Bovine serum albumin was added to the final pool of each reverse transcriptase at a final concentration of 200  $\mu$ g/ml. Each enzyme stock was dialyzed against 25 mM Tris (pH 7.4) buffer containing 10 mM  $\beta$ -mercaptoethanol, 30% glycerol, and 0.01% Triton X-100, aliquoted, and stored at -70°C until needed.

The poly(rA) $\bullet$ p(dT) template-primer was prepared by dissolving 1 mg of poly(rA) $\bullet$ p(dT)<sub>12-18</sub> in 1 ml of H<sub>2</sub>O, heating at 42°C for 5 minutes, and cooling slowly to room temperature. The ribosomal RNA template-primer was prepared by annealing the DNA primer to the 16 S ribosomal RNA at a 3:1 molar ratio. Two hundred (200)  $\mu$ g of 16 S/23 S ribosomal RNA and 2  $\mu$ g of DNA primer were mixed in 0.05 N NaCl, 0.2 M Tris-HCl, pH 8.0 (final volume 200  $\mu$ l). The mixture was placed in boiling H<sub>2</sub>O and then allowed to cool slowly (overnight) to room temperature. Assuming that this 3:1 molar ratio of primer to template is sufficient to anneal one DNA primer to each 16 S ribosomal RNA molecule, then the concentration in the stock of 3'-hydroxyl's available for extension by the enzyme is 0.73  $\mu$ M. The gapped duplex DNA was prepared from calf thymus DNA by the method of Baril *et al.*, (1977). Stock solutions of each template-primer were divided into small aliquots and stored at -20°C until needed.

The following routine procedures were used to prepare the unknown compounds for testing. Water soluble compounds were dissolved at either 1.0 mg/ml or 0.5 mg/ml in H<sub>2</sub>O on the day of the initial assay. Vortexing or sonicating the solution may be used to solubilize the compound. If needed, the solution may be heated. Hydrophobic compounds were dissolved at 5.0 mg/ml in solvent, diluted with H<sub>2</sub>O on the day of the initial assay to 0.5 mg/ml (10% in solvent). Vortexing or sonicating the solution may be used to solubilize the compound. If needed, the solution may be heated. This stock is diluted as needed with H<sub>2</sub>O and sufficient solvent to give the appropriate drug concentration in 10% solvent. The preferred solvent is DMSO followed by MeOH, EtOH, and acetone. If the drug is insoluble in these solvents then specific instructions are obtained from the project officer for testing the drug.

a. HIV-1 reverse transcriptase inhibition screen with the poly(rA) $\bullet$ p(dT)<sub>12-18</sub> template.

For water soluble drugs the following protocol was used. Ten  $\mu$ l of a solution containing the test compound was added to one well of a 96-well flat bottom microtest plate with lid, followed by 10  $\mu$ l of enzyme solution, and finally 30  $\mu$ l of a mixture containing the assay buffer, template-primer, and substrate. The final assay for HIV-1 reverse transcriptase contained 59.4 mM Tris-HCl (pH 7.9), 0.07% Triton X-100, 109 mM KCl, 9.0 mM MgCl<sub>2</sub>, 7.2 mM  $\beta$ -mercaptoethanol, 0.36 mM ethyleneglycol-bis-( $\beta$ -aminoethyl ether) N,N,N',N'-tetraacetic acid (EGTA), 0.14 mM EDTA, 0.42  $\mu$ M leupeptin, 6% glycerol, 1  $\mu$ g of poly(rA) $\bullet$ p(dT)<sub>12-18</sub>, and 60  $\mu$ M dTTP (4.16 mCi <sup>3</sup>H/ $\mu$ moles dTTP). The final assay

for AMV reverse transcriptase contained 78 mM Tris-HCl (pH 7.9), 109 mM KCl, 12 mM MgCl<sub>2</sub>, 8 mM  $\beta$ -mercaptoethanol, 0.49 mM EGTA, 1  $\mu$ g of poly(rA) $\bullet$ p(dT)<sub>12-18</sub>, and 60  $\mu$ M dTTP (4.16 mCi  $^3$ H/ $\mu$ mole dTTP). The final assay for Moloney MuLV reverse transcriptase contained 78 mM Tris-HCl (pH 7.9), 12 mM MgCl<sub>2</sub>, 8 mM  $\beta$ -mercaptoethanol, 0.49 mM EGTA, 0.25  $\mu$ g albumin, 1  $\mu$ g of poly(rA) $\bullet$ p(dT)<sub>12-18</sub>, and 60  $\mu$ M dTTP (4.16 mCi  $^3$ H/ $\mu$ mole dTTP). The final assay for Rauscher MuLV reverse transcriptase assay contained 69 mM Tris-HCl (pH 7.8), 0.028% Triton X-100, 136 KCl, 0.6 mM MnCl<sub>2</sub>, 11 mM  $\beta$ -mercaptoethanol, 0.88 mM EDTA, 0.84  $\mu$ M leupeptin, 6% glycerol, 1.25  $\mu$ g of poly(rA) $\bullet$ p(dT)<sub>12-18</sub>, and 200  $\mu$ M dTTP (400  $\mu$ Ci  $^3$ H/ $\mu$ mole dTTP). The HIV-1 and AMV reverse transcriptase assays were run for 1 hour at 37°C, the Moloney MuLV reverse transcriptase assay for 45 minutes, and the Rauscher MuLV reverse transcriptase assay for 30 minutes. They were terminated by the addition of 65  $\mu$ l of 0.2 M sodium pyrophosphate. One hundred  $\mu$ l from each well was spotted on a Whatman GF/A glass microfibre filter and processed by the method described by White *et al.*, (1982). For the HIV-1 and AMV reverse transcriptase assays results are expressed as picocuries of dTTP incorporated per hour, for the Moloney MuLV reverse transcriptase as picocuries of dTTP incorporated per 45 minutes, and for the Rauscher MuLV reverse transcriptase as picocuries of dTTP incorporated per 30 minutes. Each sample is assayed in quadruplicate and the average, standard deviation (S.D.), standard error (S.E.), and coefficient of variation (C.V.) are calculated.

For DMSO soluble compounds the protocol was modified as follows. Twenty-five  $\mu$ l of a solution containing the test compound was added to one well of a 96-well flat bottom microtest plate with lid, followed by 10  $\mu$ l of enzyme solution, and finally 15  $\mu$ l of a mixture containing the assay buffer, template-primer, and substrate. The final assay for HIV-1 reverse transcriptase contained 57.4 mM Tris-HCl (pH 7.9), 0.07% Triton X-100, 2% DMSO, 106.4 mM KCl, 8.68 mM MgCl<sub>2</sub>, 7.0 mM  $\beta$ -mercaptoethanol, 0.35 mM EGTA, 0.14 mM EDTA, 0.42  $\mu$ M leupeptin, 6% glycerol, 1  $\mu$ g of poly(rA) $\bullet$ p(dT)<sub>12-18</sub>, and 60  $\mu$ M dTTP (4.16 mCi  $^3$ H/ $\mu$ mole dTTP). The final assay for AMV reverse transcriptase contained 76 mM Tris-HCl (pH 7.9), 2% DMSO, 106.4 mM KCl, 12 mM MgCl<sub>2</sub>, 8 mM  $\beta$ -mercaptoethanol, 0.48 mM EGTA, 1  $\mu$ g of poly(rA) $\bullet$ p(dT)<sub>12-18</sub>, and 60  $\mu$ M dTTP (4.16 mCi  $^3$ H/ $\mu$ mole dTTP). The final assay for Moloney MuLV reverse transcriptase contained 76 mM Tris-HCl (pH 7.9), 2% DMSO, 12 mM MgCl<sub>2</sub>, 8 mM  $\beta$ -mercaptoethanol, 0.48 mM EGTA, 1  $\mu$ g of poly(rA) $\bullet$ p(dT)<sub>12-18</sub>, and 60  $\mu$ M dTTP (4.16 mCi  $^3$ H/ $\mu$ mole dTTP). The HIV-1 and AMV reverse transcriptase assays were run for 1 hour at 37°C and the Moloney MuLV reverse transcriptase assay for 45 minutes at the same temperature. They were terminated by the addition of 65  $\mu$ l of 0.2 M sodium pyrophosphate. One hundred  $\mu$ l from each well was spotted on a Whatman GF/A glass microfibre filter and processed by the method described above. Results are reported as described above.

Each screen was set up in the same format. The first four samples are blank filters which have been through the wash procedure. Two sets of controls (OE) which are assays without any enzyme solution are run; one is at the beginning and one at the end of each screen. Two sets of assays in which no inhibitor was present (OI) are always included. Positive controls with a known reverse transcriptase inhibitor, dCTTP or phosphonoformic acid (PFA), are also included. (If the compound is solubilized in DMSO then the OE, OI, and positive drug controls also contain 2% DMSO). In addition, 5  $\mu$ l aliquots of the assay solution are also counted; this can be used to convert the data to picomoles of dTTP incorporated. Initially, each AVS compound is tested at 100, 50, and 10  $\mu$ g/ml to see if it inhibits reverse transcriptase in this assay system. If it does, then additional screens are done at drug concentrations tailored to each compound so that the concentration that inhibits the enzyme by 50% ( $IC_{50}$ ) can be calculated.

b. HIV-1 and HIV-2 reverse transcriptase inhibition screens with the heteropolymer templates.

To determine the effect of a water soluble inhibitor on HIV-1 and HIV-2 reverse transcriptase, 10  $\mu$ l of a solution containing the test compound was added to one well of a 96-well flat bottom microtest plate with lid, followed by 30  $\mu$ l of a mixture containing the assay buffer, template-primer, and substrates. The reaction was started by the addition of 10  $\mu$ l of a solution containing the enzyme. The assay on the ribosomal RNA template contained 50 mM Tris-HCl (pH 7.4), 50 mM KCl, 10 mM MgCl<sub>2</sub>, 4 mM  $\beta$ -mercaptoethanol, 1 mg/ml bovine serum albumin, 3% glycerol, 6.66  $\mu$ g/ml of rRNA-primer, 10  $\mu$ M dATP, 10  $\mu$ M dCTP, 10  $\mu$ M dGTP, and 2  $\mu$ M dTTP (101.9 mCi <sup>3</sup>H/ $\mu$ mole dTTP). The assay on a gapped duplex DNA template contained 50 mM Tris-HCl (pH 7.4), 125 mM KCl, 2 mM MgCl<sub>2</sub>, 4 mM  $\beta$ -mercaptoethanol, 1 mg/ml bovine serum albumin, 10  $\mu$ g/ml of gapped duplex DNA, 10  $\mu$ M dATP, 10  $\mu$ M dCTP, 10  $\mu$ M dGTP, and 2  $\mu$ M dTTP (101.9 mCi <sup>3</sup>H/ $\mu$ mole dTTP). Each assay was run for 1 hour at 37°C, and terminated by the addition of 65  $\mu$ l of 0.2 M sodium pyrophosphate. One hundred  $\mu$ l from each well was spotted on a GF/A glass microfibre filter and processed by the method described by White *et al.*, (1982). For hydrophobic compounds, each well contained the solvent at 2% (v/v).

Each screen was set up in the same format. Two sets of controls (OE) which are assays without any enzyme solution are run; one is at the beginning and one at the end of each screen. Two sets of assays in which no inhibitor was present (OI) are always included. Positive controls with a known reverse transcriptase inhibitor, ddTTP, are also included. (If the compound is in a solvent other than H<sub>2</sub>O then the assays for the OE, OI, and positive drug controls also contain that solvent at 2.0%.) In addition, 5  $\mu$ l aliquots of the assay solution are also counted; this could be used to convert the data to picomoles of dTTP incorporated. Initially, each AVS compound is tested at 100, 50, and 10  $\mu$ g/ml to see if it inhibits reverse transcriptase in this assay system. If it does, then additional screens are done at drug concentrations tailored to each compound so that the concentration that inhibits the enzyme by 50% ( $ID_{50}$ ) can be calculated.

## 2. Comparison Of Known Inhibitors Of Reverse Transcriptase

Several known inhibitors of reverse transcriptase were tested against the enzymes from the four viruses. AZTTP was obtained from Burroughs Wellcome Company, the 5' triphosphate of carbovir was synthesized at SRI, and ddGTP was purchased from Boehringer Manheim. When the two guanosine analogs were tested the template-primer was poly (rC)<sub>n</sub>(dG)<sub>12-18</sub> and the radioactive tracer was <sup>3</sup>H-dGTP. As shown in Table 1, HIV-1 reverse transcriptase was at least an order of magnitude more sensitive to inhibition by all of the compounds than any of the other three enzymes.

Table 1  
Reverse Transcriptase Inhibitors

Compound	Template	ID <sub>50</sub> (μM)			
		HIV-1	AMV	McLooney MuLV	Rauscher MuLV
ddTTP	poly(rA)	0.03	3	33	> 50
AZTTP		0.03	0.29	0.8	17
PFA		0.2	7	n.t.	3
ddGTP	poly(rC)	0.05	0.58	5.6	> 50
Carbovir TP		0.03	0.75	2.6	14

n.t. = not tested

## 3. Characterization Of Cloned HIV-1 Reverse Transcriptase

Because of the potential hazards involved in preparing sufficient quantity of pelleted virus to serve as stock solutions for the HIV-1 reverse transcriptase inhibition assays, we investigated the possibility of using bacterial expressed viral reverse transcriptase. Dr. Casey Morrow at the University of Alabama in Birmingham has provided us with crude preparations of HIV-1 reverse transcriptase from *E. coli* containing either the viral gene segments for the protease, reverse transcriptase, and endonuclease or only the viral gene segment for the reverse transcriptase. We determined a number of enzymatic characteristics of these samples and compared them to those of the enzyme extracted from pelleted virus. For all of the parameters we examined, the three HIV-1 reverse transcriptase's appeared to be comparable, but not necessarily identical. Small differences, which may not be statistically significant, were observed in the K<sub>m</sub> for dITP, the ID<sub>50</sub> for ddTTP, and the degree of activation at low KCl concentrations.

The K<sub>m</sub> for dITP was 7 μM for the reverse transcriptase from pelleted virus, 15 μM for the enzyme from the bacterial expressed gene segment containing the protease and endonuclease as well as the reverse transcriptase, and 6 μM from the gene segment with only the reverse transcriptase. The effect of KCl on the activity of reverse transcriptase was also determined. The native enzyme and the reverse transcriptase from the gene segment without the protease appear to be identical. In the absence of KCl, the reverse transcriptase from the gene segment containing the protease and endonuclease is about 1/2

the activity of the other two reverse transcriptase's. An ID<sub>50</sub> for ddTTP was determined for all three reverse transcriptase's. The HIV-1 reverse transcriptase from the gene fragment containing the protease and endonuclease has an ID<sub>50</sub> (0.06 μM) which is almost twice as large as that of the other two reverse transcriptase's (0.03 μM). These data lend strong support to using bacterial expressed reverse transcriptase for the inhibition screen. In addition to being safer to handle than the virus, enzyme from this source does not contain the high levels of Triton X-100 needed to disrupt the virus pellet.

#### 4. Purification Of Host Cell Enzymes

Human DNA polymerases α, β, and γ and DNA primase were partially purified from a human chronic myelogenous leukemia cell line (K562) grown in cell culture by a previously described method, Parker *et al.*, (1991). Briefly, 5 ml of packed cells were homogenized and loaded onto a 50-ml DEAE-cellulose column connected in tandem to a 50-ml cellulose-phosphate column equilibrated with a 50 mM potassium phosphate buffer (pH 7.5). The DNA polymerase α/DNA primase complex and DNA polymerase γ bound to the DEAE-cellulose column, and DNA polymerase β bound to the cellulose-phosphate column. DNA polymerase β was further purified by chromatography on single strand DNA-cellulose. The DNA polymerase α/DNA primase complex was separated from DNA polymerase γ by chromatography on cellulose-phosphate, and then each enzyme was further purified by chromatography on single strand DNA-cellulose. Under these mild purification procedures DNA polymerase α and DNA primase were not separated from one another. The three DNA polymerases were distinguished from one another by their chromatographic behavior, their template preference, and their sensitivities to dideoxynucleotides and N'-ethylmaleimide.

### F. In Vivo Models

#### 1. Murine Models

The overall rationale for establishing the *in vivo* model of murine ecotropic retrovirus disease is essentially the same as that for the primary drug discovery screens in tissue culture and cell-free systems, i.e., to evaluate the therapeutic potential of a variety of agents or combinations of agents and to select the most promising agents for further investigation and clinical trials. However, some major differences distinguish the *in vivo* murine retrovirus models from the primary drug screening programs. The primary screens were organized to evaluate large numbers of candidate agents, some of which had received little or no prior evaluation for any antiviral effects. The need to screen so many compounds required the development of a simple standardized panel of test cell lines for screening possible antiviral effects at non-lethal doses of the agents. However, screening potential antiretroviral agents with just a few cell lines has allowed only limited predictions of clinical activity. In contrast to this quantitatively extensive, but somewhat superficial approach to drug screening, the *in vivo* murine retroviral disease models evaluate in depth only a few selected agents, for which the primary drug screens or studies in other laboratories have indicated promise as biological response modifiers (BRM) and/or antiviral agents.

Two murine models of retroviral disease have been established: the LP-BM-5 virus mixture, dubbed murine AIDS (MAIDS) because it shares some of the features of the human disease, and Rauscher leukemia virus (RMuLV), which is actually a mixture of the Rauscher MuLV and the Rauscher SFVV. The LP-BM-5 model utilizes adult female C57BL/6 mice, and the RLV model uses adult female BALB/c mice. Treatment of infected mice with antivirals and BRM is initiated before or after infection with various schedules and doses. In the LP-BM-5 model, mice are sacrificed four weeks after infection. Anesthetized mice are weighed and exsanguinated, and spleen weights are recorded at the time of sacrifice. In the RLV model the same procedures are performed two or three weeks after infection.

Additional groups of LP-BM-S infected mice are maintained without further treatment until death. Reduction in splenomegaly serves as the initial test for antiviral activity. Viremia (quantitated in an UV-XC plaque assay), RT levels, and IgM and IgG levels (by antibody-capture ELISA or radial immunodiffusion) are measured in serum samples. Agents which show activity in these assay systems are further evaluated for their ability to protect or restore immune function in LP-BM-S-infected animals. Various components of the immune system are monitored, including T-lymphocyte function by mixed lymphocyte reaction (MLR) and by mixed lymphocyte tumor reaction-cell mediated cytotoxicity (MLTR-CMC), which measures generation of cytotoxic T lymphocytes, natural killer (NK) activity, and macrophage activation. AIDS patients show deficiencies in a number of these immune functions. Additionally, due to the reported myelosuppressive effects of antiviral therapy, further studies focused on the effect of BRM and antivirals on the hematopoietic function of bone marrow stem cells, as measured in the *in vitro* colony formation assay.

a. UV-XC assay

The UV-XC assay involved a two-stage culture procedure to enumerate the number of plaque-forming units (PFU) in serum and other samples. SC-1 cells, originally derived from feral mouse embryos, were seeded in 12-well tissue culture plates at a density of  $7 \times 10^4$  cells/ml. After 20 hours, the cultures were incubated with DEAE-dextran (25 µg/ml) and rinsed. Then appropriate serial dilutions of virus samples were added. Three days after virus inoculation, the medium was decanted, and the cultures were irradiated with a UV lamp at a total dose of 1200 erg/mm<sup>2</sup>. XC cells, a rat tumor cell line induced by Rous sarcoma virus, were added at a concentration of  $2 \times 10^5$ /ml. Three days later, the cultures were rinsed, fixed with formalin and stained with crystal violet. Plaques in the cell monolayer were counted with a dissecting microscope. The infectious centers assay is a variation of the UV-XC assay in which single-cell suspensions of viable murine spleen cells serve as the source of virus, rather than serum or splenic homogenates. This assay quantitates the number of productively infected cells in the spleen.

b. Reverse transcriptase assay (murine)

The optimum conditions for the assay of RT from Rauscher MuLV were worked out using virus pelleted from cell-free culture medium. No Rauscher SFFV was present in the samples used for developmental work. The RT was extracted from the virus pellet by incubation with buffer containing 0.1% Triton X-100 and 200 mM KCl. The addition of the divalent cation Mn<sup>++</sup> gave maximum enzyme activity in the range between 0.4 and 0.8 mM. KCl stimulated the enzyme activity up to about 150 mM, but was inhibitory at 220 mM. The pH optimum was tentatively determined to be around 7.8. The K<sub>m</sub> for the template primer, poly(rA)<sub>n</sub>poly(dT)<sub>12-18</sub>, was 4 µg/ml and for the substrate dTTP it was 70 µM.

The preceding information was used to establish a procedure for the assay of RT in sera infected with Rauscher MuLV and SFFV. Mouse sera are stored frozen (-70°C) and may either be thawed before beginning the procedure, or if the volume in the aliquot is known they may be thawed during the lysing procedure.

- 1) An equal volume of the following buffer is added to the mouse serum in a capped tube: 40mM Tris-HCl (pH 7.8) containing 0.2% Triton X-100, 20mM  $\beta$ -mercaptoethanol, 6 µM leupeptin, 400 mM KCl, and 2 mM EDTA. This mixture may be left at room temperature until the sera has thawed.
- 2) Keep on ice for 30 minutes after thawing; invert once or twice during this period to ensure adequate mixing.
- 3) Either assay sample for RT activity immediately or store at 4°C until needed for assay.

- 4) Ten  $\mu$ l of the lysate from Step 2 is incubated for 30 minutes at 37°C in a 50  $\mu$ l reaction containing 1.25  $\mu$ g of poly(rA) $\bullet$ p(dT)<sub>12-18</sub>, 200  $\mu$ M dTTP (400  $\mu$ Ci of  $^3$ H/ $\mu$ mole of dTTP), 8 mM  $\beta$ -mercaptoethanol, 120 mM KCl, 0.6 mM MnCl<sub>2</sub>, 0.10 mM EDTA, 0.6  $\mu$ M leupeptin, and 0.02% Triton X-100 in 80 mM Tris-HCl (pH 7.8). The linear range of the assay is 1 to 100 picomoles of dTTP incorporated in the 30-minute incubation. Samples were then washed and harvested in a Skatron automated harvesting system. Incorporation of radioactivity was measured in a liquid scintillation counter.

A unit of activity is defined in terms of the number of picomoles of substrate incorporated in hour by 1 ml of sera.

c. Immunological methods

Natural Killer (NK) activity was measured in a 4-hour  $^{51}$ Cr release cytotoxicity assay. In this assay  $10^4$   $^{51}$ Cr-labelled YAC-1 target cells, a murine lymphoma line, were mixed with serial dilutions of effector cells, murine spleen cells, in the wells of a round-bottom, 96-well microtiter plate. The effector-to-target ratios range from 50:1 down to 6:1. After the 4-hour incubation, the supernatant was collected using a supernatant collection system (Skatron SCS), and release of radioactivity from killed target cells was measured in a gamma scintillation spectrometer. Results are expressed as % specific release of radioactivity, defined as  $100 \times [($ experimental cpm released - spontaneously released cpm $) + ($ maximum releasable cpm - spontaneously released cpm $)]$ , at the different effector-to-target ratios. Spontaneous release is measured in the absence of effector cells, and maximum release is determined by detergent lysis of the target cells. The activity of cytolytic T lymphocytes was measured by a MLTR-CMC assay. This is a two-stage procedure involving an *in vitro* immunization step, followed by a short-term cytotoxicity assay. In the immunization phase, murine spleen cells were co-cultured for five days with  $\gamma$ -irradiated, allogeneic P815 cells, a murine mastocytoma line, as stimulators. The stimulated spleen cells were harvested after the five-day culture, and their cyolytic activity against P815 cells was measured in a four-hour  $^{51}$ Cr release assay. This assay is performed in a fashion similar to the NK assay described above, except that  $^{51}$ Cr-labelled P815 cells are used as targets.

2. Simian Models

a. Antibody ELISA

A commercially produced HIV-2 antibody ELISA kit (Genetic Systems) has been tested for use for the detection of SIV antibodies with success. The assay is run over a 3 hour period and antibody titers can be determined using a kinetic microplate reader (Molecular Devices) allowing for the use of one set of duplicate wells.

b. ELISA Assay For SIV p24

A commercially produced HIV p24 ELISA kit (Coulter Electronics) cross-reacts with SIV p24.

c. Reverse Transcriptase Assay (Simian)

A microplate reverse transcriptase assay was developed. The assay is similar to that previously described by Spira *et al.*, (1987). Test fluids are treated with 30% polyethylene glycol overnight in order to precipitate the virus. The virus is pelleted and resuspended in 100  $\mu$ l TNE buffer (1 M Tris, 5 M NaCl, 0.1 M EDTA, pH 7.2). After the samples are mixed for two hours, 30  $\mu$ l of a polymerase reaction mix (0.0625 M Tris-HCl, pH 7.6, 0.125 M NaCl, 7.5 mM MgCl<sub>2</sub>, 0.0125 M DTT, 5 mM oligo dT<sub>12-18</sub>, 0.05 M poly (rA), 10% Triton X-100, 0.1562 mCi/ml  $^3$ H-dTTP) is added to 10  $\mu$ l of the virus suspension in a microtiter plate and allowed to incubate for 1 hr. The reaction is stopped by the

addition of 100  $\mu$ l of 10% TCA. The plates are harvested onto glass filters using a Skatron harvesting system and counted using a scintillation counter.

d. Virus Isolation Procedure

SIV is recovered from infected monkeys using a co-cultivation procedure. Fresh monkey peripheral blood leukocytes are collected with ficoll-hypaque and stimulated with a maximal stimulating dose of phytohemagglutin-p (5  $\mu$ g/ml) in RPMI 1640 containing 10% FBS. The cells are incubated overnight, washed and placed on 10% interleukin-2. The cell concentration is fixed at  $3 \times 10^6$  per ml and  $3 \times 10^6$ /ml phytohemagglutin stimulated human peripheral blood leukocytes are added. The cultures are incubated for 28 days and sampled weekly for RT activity with weekly feeding with fresh human peripheral blood leukocytes and a 50% media replacement.

e. Infection Of Rhesus Macaques With SIVsmm/pbj

Two macaques lentivirus isolates (SIVmne and SIVsmm/pbj) were chosen for SIV model development in Rhesus macaques. These isolates are similar in structure, but differ substantially in disease pathogenesis. The isolate developed is named SIVsmm/pbj, which causes death in pigtailed macaques within two weeks. The variant of SIV (strain SMM/PBj), isolated from a chronically infected pigtailed macaque at the Yerkes Primate Research Center, in previous studies produced acutely fatal disease in pigtail macaques. Six rhesus monkeys (three juveniles plus three adults) were inoculated IV with supernate fluid containing 3 TCID<sub>50</sub> from human peripheral blood lymphocyte cultures co-cultivated with spleen cells from the original pigtail macaque (PBj). Five of six seroconverted (Table 2), but only one rhesus monkey (a juvenile, #4EN) died (Day 10). Homogenized tissues from 4EN were passaged to additional monkeys in an attempt to increase lethality. One of the remaining juveniles developed diarrhea at Day 10, but recovered. Virus was recovered from all six monkeys on at least one occasion by co-cultivation of their lymphocytes with normal human peripheral blood leukocytes (PBL) (Table 3). In a second passage of the PBj isolate using 4EN derived tissue homogenates acute disease; four died (Days 8 - 10), one recovered (following rehydration), and one remained asymptomatic. All six seroconverted (Table 2) and had recoverable virus (Table 3). To date no adults (three of three) have developed acute disease, although two of three seroconverted and one of these has remained viremic (Table 3).

Clinical disease is characterized by diffuse, severe lymphadenopathy within 5 days of inoculation and severe diarrhea beginning 1 to 3 days before death. Anorexia, lymphopenia (< 1000/mm<sup>3</sup>) and mild hypoalbuminemia preceded onset of diarrhea by 24 hours, while all other hematology and clinical chemistry parameters remained within normal limits. Aerobic and anaerobic blood cultures were negative, and there was no evidence of opportunistic viral or bacterial agents in GI or lymphoid tissues by light or electron microscopy or in feces by culture, ELISA, or electron microscopy. Necropsy revealed 2- to 10-fold increases in all lymphoid tissues; most severely affected were spleen, mesenteric lymph nodes, and gut-associated lymphoid tissues. Histologically lymphoid tissue is hyperplastic predominantly in T-cell dependent areas due to increased numbers of lymphocytes, histiocytes and reticular cells. Occasional multinucleated giant cells are present in the gut associated lymphoid tissues. In the gastrointestinal tract there was no gross or microscopic evidence of ulceration or erosion. However, there was severe multifocal to patchy villus blunting and fusion with crypt hyperplasia in the small intestine, and disorganization of mucosal epithelial structure in the colon. The cause of death appears to be untreatable GI fluid loss and acidosis.

Table 2  
Antibody Titers for SIVpbj Infected Monkeys

Days Post Infection	Monkey Number							
	Adults			Juveniles			Controls	
<b>Group 1</b>	<b>112X</b>	<b>107X</b>	<b>LA26</b>	<b>HCI</b>	<b>4EN</b>	<b>4DH</b>	<b>48L</b>	<b>4SE</b>
0	0.9*	1.3	0.9	1.3	1.0	0.6	0.6	0.6
7	0.9	0.8		0.9	1.0	0.5	0.6	0.5
14	0.9	0.6	1.0	0.6		0.8	0.5	0.5
21	1.1	0.4	1.1		4.8	3.6	0.5	4.9
35	7.6	1.0	5.1	10.9		6.9	0.5	0.6
67	9.2	2.8	15.6	14.4		9.2	0.6	0.7
80	9.9	2.2	14.5	13.0		10.1	1.1	1.1
94	4.2	2.3	17.0	14.2		12.8	0.8	0.8
178				18.3		15.4		
<b>Group 2</b>				<b>46A</b>	<b>46G</b>	<b>4CL</b>		
-11				0.3	0.3	0.2		
4				0.4	0.4	0.3		
7				0.5	0.5	0.3		
10					0.5			
18						1.8		
44						9.3		
129						23.0		
<b>Group 3</b>	<b>112X</b>	<b>107X</b>	<b>LA26</b>	<b>4SE</b>	<b>48L</b>	<b>46W</b>		
4	11.9	1.6	19.3	1.0	0.3	0.6		
3	13.0	1.7	22.1	0.6	0.3	0.3		
10	13.5	1.9	19.8	1.4	0.4	0.8		
17	13.5	2.1	20.7	3.2	0.9			
30	15.3	1.6	26.3	8.0				
49	14.2	1.2	28.3	8.7				

\* milliOD/min on a kinetic read

Table 3  
Virus Isolation by Cocultivation With Human PBMC

Marker No.	First Day Post Challenge											
	Group 1			Group 2			Group 3			Group 4		
	12	24	48	12	24	48	12	24	48	12	24	48
Group 1												
4DH	POS(14)*	POS(14)	POS(14)	POS(21)	POS(21)	NEO						
HCl	POS(14)	POS(14)	POS(14)	POS(14)	POS(21)	NEO	NEO	NEO	NEO	NEO	NEO	POS(20)
4EN	POS(14)	DIED										
107X	NEO	POS(20)	NEO									
112X	NEO	POS(21)	NEO	POS(21)	NEO							
LA26	POS(14)	POS(14)	NEO	POS(14)	NEO							
Control												
48L	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO
45P	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO
46W	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO
Group 2	4	7	10	11	12	11	12	11	12	11	12	11
46A	POS(14)	POS(14)	DIED	POS(21)	POS(21)	DIED	POS(14)	POS(14)	POS(14)	POS(14)	POS(14)	POS(14)
46G	POS(14)	POS(14)	POS(14)	POS(14)	POS(14)	POS(14)	POS(14)	POS(14)	POS(14)	POS(14)	POS(14)	POS(14)
4CL												
Group 3	4	1	1	19	19	19	17	17	17	17	17	17
46W	NEO	POS(21)	POS(7)	POS(7)	POS(7)	DIED	POS(7)	POS(7)	POS(7)	POS(7)	POS(7)	POS(7)
45P	NEO	NEO	NEO	NEO	NEO	DIED	NEO	NEO	NEO	NEO	NEO	NEO
48L	NEO	NEO	NEO	NEO	NEO	DIED	NEO	NEO	NEO	NEO	NEO	NEO
LA26	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO
107X	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO
112X	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO	NEO

\* = virus isolation (first day positive in cocultivation).

## G. Special Projects

### 1. UV-XC Plaque Assay

Falcon 6-well tissue culture plates are seeded with  $1.75 \times 10^5$  SC-1 cells in 2.5 ml Eagle's minimum essential medium supplemented with 5% heat-inactivated FBS, 100 u/ml penicillin, and 100  $\mu\text{g}/\text{ml}$  streptomycin. On the following day the medium is aspirated and the cultures are pretreated with DEAE-dextran (25  $\mu\text{g}/\text{ml}$  in PBS) for 1 hour at 37 °C. The DEAE-dextran is removed and the cultures are rinsed with PBS. Duplicate cultures are then inoculated with 0.5 ml of the appropriate dilution of serum. The inoculum is adsorbed for 1 hour, removed, and then the cultures are rinsed with PBS. The cultures are then refed with 2.5 ml medium.

On Day 3 post-virus inoculation, the medium is aspirated and cultures are irradiated with a UV germicidal lamp for 20 seconds at a distance of 27.6 cm. Immediately after irradiation,  $5 \times 10^5$  XC cells are added in 2.5 ml Eagle's minimum essential medium + 10% FBS.

On Day 3 post-UV-irradiation, the cultures are fixed with formalin and stained with 0.1% crystal violet. The plaques are counted with the aid of a dissection microscope. The average PFU per ml is calculated by multiplying the average PFU  $\times$  2 since the inoculum used is 0.5 ml.

### 2. Reverse Transcriptase Assay (Murine)

The optimum conditions for the assay of reverse transcriptase from Rauscher MuLV were worked out using Rauscher MuLV pelleted from cell-free culture medium. No Rauscher SFFV was present in the samples used for developmental work. The reverse transcriptase was extracted from the virus pellet by incubation with buffer containing 0.1% Triton X-100 and 200 mM KCl. The addition of the divalent cation  $Mn^{++}$  gave maximum enzyme activity in the range between 0.4 and 0.8 mM. KCl stimulated the enzyme activity up to about 150 mM, but was inhibitory at 220 mM. The pH optimum was determined to be around 7.8. The  $K_m$  for the template-primer, poly(rA)\*poly(dT)<sub>12-18</sub>, was 4  $\mu\text{g}/\text{ml}$  and for the substrate, dTTP, it was 70  $\mu\text{M}$ .

The preceding information was used to establish a procedure for the assay of reverse transcriptase in sera infected with Rauscher MuLV SFFV. Mouse sera are stored frozen (-70 °C) and may either be thawed before beginning the procedure, or if the volume in the aliquot is known they may be thawed during the lysing procedure.

- a. An equal volume of the following buffer is added to the mouse serum in a capped tube: 40 mM Tris-HCl (pH 7.8) containing 0.2% Triton X-100, 20 mM  $\beta$ -mercaptoethanol, 6  $\mu\text{M}$  leupeptin, 400 mM KCl, and 2 mM EDTA. This mixture may be left at room temperature until the sera has thawed.
- b. Keep on ice for 30 minutes after thawing; invert once or twice during this period to ensure adequate mixing.
- c. Either assay sample for reverse transcriptase activity immediately or store at 4 °C until needed for assay.

- d. Ten  $\mu$ l of the lysate (Step c) is incubated for 30 minutes at 37 °C in a 50  $\mu$ l reaction containing 1.25  $\mu$ g of poly(rA) $\bullet$ p(dT)<sub>12-18</sub>, 200  $\mu$ M dTTP (400  $\mu$ Ci of  $^3$ H/ $\mu$ mole of dTTP), 8 mM  $\beta$ -mercaptoethanol, 120 mM KCl, 0.6 mM MnCl<sub>2</sub>, 0.10 mM EDTA, 0.6  $\mu$ M leupeptin, and 0.02% Triton X-100 in 80 mM Tris-HCl (pH 7.8). The linear range of the assay is 1 to 100 picomoles of dTTP incorporated in the 30-minute incubation.

A unit of activity is defined in terms of the number of picomoles of substrate incorporated in 1 hour by 1 ml of sera.

### III. RESULTS

#### A. Primary Screens

During this reporting period (January 4, 1988 - April 30, 1991) we received 4481 compounds to be tested in the HIV primary screen. Cumulative primary screening activity has been summarized in Table 4. This Table denotes the number of compounds for which we have at least one satisfactory test (ATH8, MT-2 or CEM cells) against HIV-1. From January 1, 1990 until September 1, 1990, all submitted compounds were tested against MT-2 cells infected with the III<sub>B</sub> isolate of HIV-1. Follow-up testing included assays on CEM cells infected with HIV-1<sub>RF</sub>. For the remaining 4 months of 1990, all compound were routinely tested on both CEM and MT-2 cells infected with the RF isolate of HIV-1.

Table 4

*In Vitro* Antiviral Primary Screen: Number of Compounds Received and Tested According to Shipment Numbers as of April 30, 1991

Shipment Number	Compounds per Shipment	Date Received	HIV
9	16	09/12/86	16
11	38	10/17/86	38
12	7	11/03-04/86	7
13	40	11/13/86	40
15	26	12/05/86	26
16	32	12/12/86	32
17	31	01/13/87	31
18	30	01/30/87	30
19	101	03/02/87	101
20	71	03/18/87	71
21	85	04/14/87	76
22	89	05/05/87	85
23	4	05/08/87	4
24	7	06/03/87	6
25	9	06/12/87	8
26	67	06/26/87	67
27	46	07/21/87	46
28	12	08/10/87	12
29	6	08/19/87	6
30	134	09/03/87	120
31	110	09/11/87	106
32	130	10/09/87	103
33	69	11/03/87	69
34	46	11/25/87	46
35	80	12/22/87	78
36	49	01/29/88	49
37	47	03/09/88	47
38	2	03/15/88	2
39	76	03/23/88	76
40	88	04/26/88	88
41	78	05/13/88	75
42	85	06/14/88	49
43	84	07/08/88	46
44	56	08/10/88	56
45	83	09/13/88	82
46	75	10/06/88	73
47	1	10/20/88	1
48	33	11/02/88	33
51	12	01/10/89	12
52	5	02/09/89	5
53	84	03/15/89	84
54	30	04/19/89	28*
56	117	05/12/89	111*
57	67	06/07/89	60*
58	91	07/13/89	79*
59	34	08/11/89	30*
60	46	09/07/89	46
61	83	10/06/89	83
62	158	11/21/89	140*
63	129	02/07/90	129

Table 4 (Cont'd)

<u>Shipment Number</u>	<u>Compounds per Shipment</u>	<u>Date Received</u>	<u>HIV</u>
64	9	02/27/90	9
65	103	03/16/90	88*
66	153	04/10/90	139*
67	90	05/09/90	90
68	145	05/30/90	143*
69	159	06/27/90	159
70	156	06/29/90	156
71	4	07/18/90	3*
72	122	08/03/90	122
73	142	09/11/90	133*
74	166	10/04/90	135*
75	142	10/25/90	139*
76	317	12/06/90	314*
1A <sup>b</sup>	15	01/17/88	15
2A	1	02/23/88	1
3A	6	06/23/88	6
4A	19	08/26/88	19
5A	1	09/13/88	1
6A	1	10/05/88	1
7A	2	12/20/88	2
8A	15	12/29/88	15
9A	17	02/28/89	17
10A	9	03/02/89	8
11A	8	03/22/89	8
12A	1	05/10/89	1
13A	4	10/13/89	4
14A	15	12/01/89;01/04/90	14*
15A	4	02/08/90	2*
16A	6	02/27/90	6
17A	2	03/07/90	2
18A	4	04/09/90	4
19A	70	07/30/90;08/09/90	51*
20A	324	09/12/90	324
21A	2	09/18/90	2
22A	203	09/21/90	203
23A	1	09/27/90	1
24A	8	11/09/90;11/19/90	8
25A	3	12/12/90	3
26A	3	12/20/90	3
27A	416	12/21/90	416
<b>Cumulative Total</b>		<b>5767</b>	<b>5474</b>

a = Supply of compound was insufficient for testing the remaining compounds in this shipment.

b = Shipment numbers with "A" code were received through the NCDDG program from Dr. Michael Chirigos.

Note: Compounds received prior to this contract period (i.e. 1/4/88 - 4/30/91) were tested on the AIDS ADD-ON Contract (Contract No. DAMD17-86-OC-6013).

**MTT Assay:** During this contract period we performed approximately 10,000 dose response test versus HIV-1 using ATH8, MT-2 or CEM cells. Approximately 10% of these tests were positive control (AZT and/or ddC) assays. A cumulative summary of all HIV testing (i.e., total experience through April 30, 1991) is included in Appendix A. Numerous compounds exhibited significant antiviral efficacy against HIV in ATH8, MT-2 or CEM cells during this contract period (See Appendix B). The most active compounds (i.e. confirmed activity with Selectivity Index (SI) of  $\geq 10$ ) are listed in Table 5.

During our overall experience of testing AVS compounds against HIV, several drugs have shown activity in one of the primary screens and were retested to confirm the initial positive results. These confirmed active compounds are listed in Appendix C. This list includes compounds from 1987, 1988, 1989, 1990 and 1991 testing.

Table 5

**AVS Compounds Most Active<sup>a</sup> Against HIV-1  
from the Primary Screen**

AVS No.	Activity Rating	AVS No.	Activity Rating	AVS No.	Activity Rating
0206	2	3819	3	5956	4
0598	4	3939	4	5996	2
0702	2	4035	4	6180	2
0703	2	4036	1	6184	2
0999	1	4075	2	6185	1
1603	4	4357	4	6192	1
1846	2	4593	1	6194	2
1850	1	4611	4	6195	1
2353	4	4730	4	6197	1
2572	1	4923	4	6198	1
2575	1	5025	2	6199	1
2581	1	5121	2	6200	2
2582	2	5186	3	6201	2
2585	2	5360	4	6208	3
2589	1	5691	2	6209	2
2600	2	5733	1	6210	3
2639	4	5872	1	6211	1
2657	4	5874	4	6215	3
2922	4	5875	1	6217	2
2955	4	5876	2	6218	3
2996	3	5880	2	6219	1
3345	3	5882	2	6220	2
3443	3	5884	3	6223	1
3491	4	5885	2	6289	2
3513	3	5887	3	6293	4
6466	4	7930	2	8260	3
6510	1	7974	4	8261	2

Table 5 (Cont'd)

AVS No.	Activity Rating	AVS No.	Activity Rating	AVS No.	Activity Rating
6511	3	7975	2	8366	1
6512	3	7976	4	8375	1
6777	1	7981	3	8434	2
6943	2	7983	2	8519	1
6947	2	8041	1	8520	4
7207	1	8225	3	8701	4
7208	2	8234	2	8702	4
7295	2	8235	1	8719	2
7767	4	8236	2	8720	2
7839	4	8237	2	9464	4
7890	2	8257	3	9466	3
7891	4	8259	4		

KEY	
Code	Selectivity Index (SI)
1	10-19
2	20-49
3	50-99
4	>100

\* Compounds included in this table have a Selectivity Index of  $\geq 10$ .

Two positive control drugs ddC and AZT were tested in parallel with each assay. ddC and AZT were tested at six concentration's per plate. The quality of the assay was determined by the activity displayed by the positive control drugs. If the positive control drug was not active (i.e. at least 50% CPE inhibition observed) in a given experiment, then the entire test was considered unsatisfactory and all compounds tested in parallel with this positive control drug were repeated. Typical results of the positive control drugs tested during this report period are listed in Tables 6, 7, 8 and 9. Results of these positive control drugs obtained during the course of this contract (i.e. total experience) are listed chronologically in Appendix A.

Table 6

Summary of Concurrent Positive Control Results for Dideoxycytidine  
(ddC, AVS-2639) Versus HIV in CEM Cells (MTT Assay)

AVS No.	Plt #	Cell Line	Test Date	Diff- rntl.	IC 50	TC 25	SI	TAI
2639	OAY	CEM	03/28/89	1.361 <	0.03	0.83 >	25.90 >	14.89
2639	1G5	CEM	03/21/90	1.478	0.05	0.47	10.14 >	30.02
2639	1K8	CEM	04/26/90	0.700 <	0.03	0.25 >	7.85 >	32.76
2639	26J	CEM	08/29/90	0.771	0.06	0.69	11.76 >	18.38
2639	2WX	CEM	11/06/90	0.776	0.02	1.33	57.19	28.97
2639	3FM	CEM	12/20/90	1.182	0.02	0.86	54.82	33.92
2639	47H	CEM	01/29/91	0.813	0.002	0.08	36.90	33.12
2639	4AI	CEM	02/08/91	0.988	0.003	0.18	66.16	33.52

Table 7

Summary of Concurrent Positive Control Results for Dideoxycytidine  
(ddC, AVS-2639) Versus HIV in MT-2 Cells (MTT Assay)

AVS No.	Plt #	Cell Line	Test Date	Diff- rntl.	IC 50	TC 25	SI	TAI
2639	23V	MT2	08/23/90	1.193	0.47	9.50	20.30 >	52.65
2639	29U	MT2	09/05/90	1.313	0.14 >	10.00 >	69.32 >	68.80
2639	2AF	MT2	09/13/90	1.114	0.57 >	10.00 >	17.54 >	46.53
2639	2U4	MT2	10/23/90	0.952	0.05	4.94	93.50 >	66.19
2639	3ED	MT2	12/12/90	0.920	0.05	4.55	99.52 >	72.00
2639	3ZG	MT2	01/23/91	1.318	0.13	2.04	15.36 >	42.65
2639	4B1	MT2	01/31/91	1.465	0.09	1.90	20.81	43.62
2639	4DL	MT2	02/22/91	1.325	0.15	9.74	63.71 >	69.09

Table 8

**Summary of Concurrent Positive Control Results for AZT (AVS-1603)**  
**Versus HIV in CEM Cells (MTT Assay)**

AVS No.	Plt Cell # Line	Test Date	Diff- rntl.	IC 50	TC 25	SI	TAI
1603	2Z3 CEM	11/07/90	1.074	0.002 >	1.00 > 489.39 >	49.60	
1603	3DT CEM	12/12/90	1.286	0.0009 >	1.00 > 1094.5 >	51.90	
1603	3ES CEM	12/13/90	1.299	0.0007 >	1.00 > 1514.7 >	48.30	
1603	3HC CEM	01/04/91	1.328	0.0005 >	1.00 > 1985.5 >	56.60	
1603	3L7 CEM	01/11/91	0.665	0.0002 >	1.00 > 5436.2 >	76.20	
1603	3NP CEM	01/18/91	0.958	0.0005 >	1.00 > 1975.9 >	53.87	
1603	439 CEM	01/22/91	0.762	0.0006 >	1.00 > 1747.5 >	55.16	
1603	3WD CEM	01/24/91	0.888	0.0005 >	1.00 > 2118.8 >	65.50	
1603	3YQ CEM	01/25/91	1.368	0.002 >	1.00 > 409.49 >	41.09	
1603	4CH CEM	02/20/91	0.758	0.0007 >	1.00 > 1420.8 >	48.46	

Table 9

**Summary of Concurrent Positive Control Results for AZT (AVS-1603)**  
**Versus HIV in MT-2 Cells (MTT Assay)**

AVS No.	Plt Cell # Line	Test Date	Diff- rntl.	IC 50	TC 25	SI	TAI
1603	0X6 MT2	08/08/89	1.227 <	0.03 >	10.00 > 312.50 >	83.13	
1603	0QP MT2	08/09/89	1.094	0.05 >	10.00 > 207.09 >	81.65	
1603	1CF MT2	10/26/89	1.275	0.10 >	10.00 > 102.96 >	69.10	
1603	14C MT2	12/05/89	1.366	0.13 >	10.00 > 75.30 >	67.54	
1603	14L MT2	12/07/89	1.092 <	0.03 >	10.00 > 312.50 >	96.33	
1603	15F MT2	12/20/89	1.309	0.06 >	10.00 > 160.24 >	82.94	
1603	18H MT2	02/01/90	1.234	0.05 >	10.00 > 184.12 >	86.74	
1603	1DS MT2	03/01/90	1.004	0.05 >	10.00 > 195.02 >	86.84	
1603	1DK MT2	03/02/90	1.323	0.03 >	10.00 > 393.18 >	54.83	
1603	1PG MT2	03/15/90	1.136	0.13 >	10.00 > 74.77 >	74.83	

## B. Secondary Screens

### 1. HIV

Five compounds received evaluation in secondary screening assays at SRI during 1990. These compounds included AVS 7891 and AVS 8520 as well as AVS 9466 (AM 242), AVS 9464 (AM 612) and AVS 9465 (AM 619). AVS 7891 and AVS 8520, derivates of TIBO, were evaluated against a panel of HIV-1 and HIV-2 isolates, were evaluated in syncytial and chronic infection assays, and were evaluated in time of addition and variable MOI assays (see Experimental Methods, Section I). The results of these assays were accepted for publication in Antiviral Research in April, 1991. These data were also presented in Abstracts presented at Gainesville, FL (HIV Disease: Pathogenesis and Therapy), and New Orleans, LA (The Fourth International Conference on Antiviral Research). We determined in the performance of these assays that the TIBO compounds exhibited potent activity *in vitro* against HIV-1 but were totally inactive against isolates of HIV-2 (Table 10). In experiments examining the effect of delayed addition of the TIBO compounds (Figure 3), their activity paralleled that observed for AZT, consistent with their presumed mechanism of action. The TIBO compounds also exhibited activity similar to that observed for AZT in assays in which the multiplicity of infection was altered (Figure 4). We have also observed a reduction in syncytium formation when the TIBO compounds were incubated with chronically infected and uninfected CEM cells in short term (24 hours) cocultivation assays (Figure 5).

Table 10  
Inhibition of HIV-1 Infectivity and Productivity by R82913

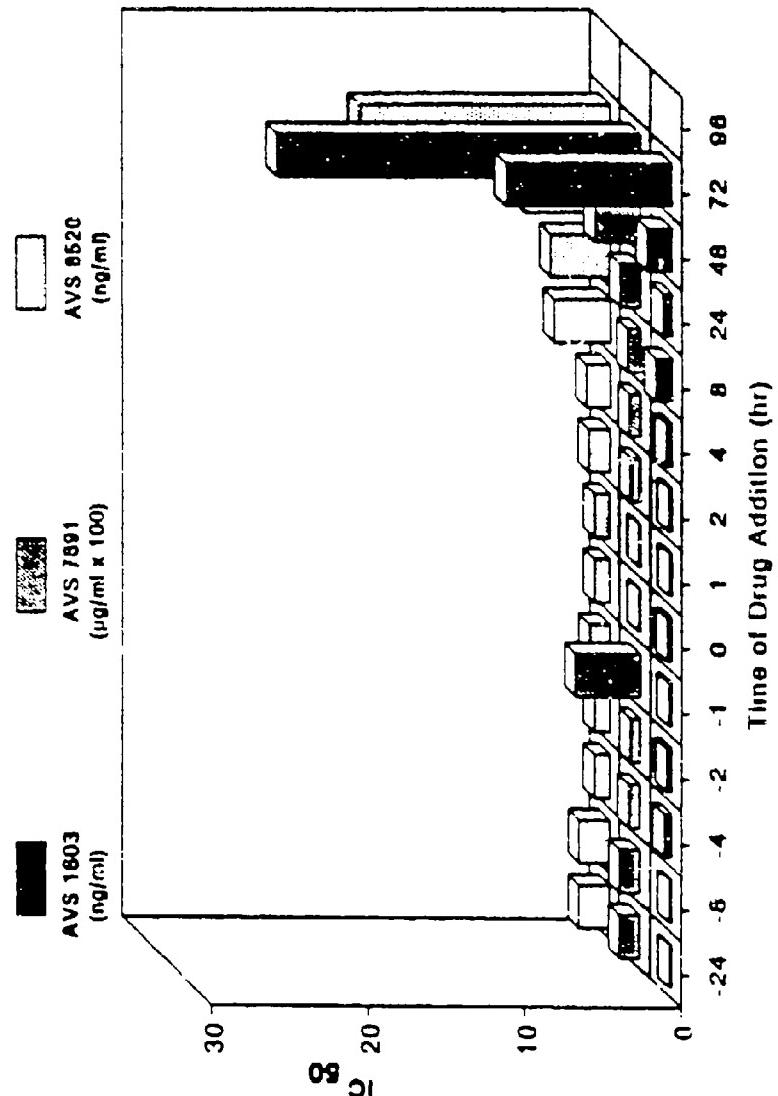
Isolate	IC <sub>50</sub> (μM)	
	INFECTIVITY <sup>a</sup>	Productivity <sup>b</sup>
ED	0.009	0.060
SKI	0.034	0.031
RF	0.043	0.009
McK	0.064	0.078
HTLV-III <sub>B</sub>	0.067	0.051
MN	0.124	0.092
LAV	0.148	0.149
214	0.161	0.058
KELL	0.183	0.143
G	0.188	0.075
205	0.205	0.065
C	0.222	0.095
PM16	0.652	0.161
HIV-2 <sub>ROD</sub>	> 310	> 310

<sup>a</sup>Infectivity is measured by MTT quantitation of cytopathic effects in culture.

<sup>b</sup>Productivity is measured by reverse transcriptase assay of cell free supernatant samples.

The AM compounds were the subject of a poster presented at the Symposium of Antivirals, Vaccines, and Immunotherapy of HIV Infection, St. Petersburg Beach, FL, in May 1991. Two of these compounds, which are polysaccharides, are highly active against HIV-1 with toxicity observed at higher concentrations. The third compound (AM669) has a great deal of toxicity when tested in CEM and MT2 cells. The activity of these compounds was detected near the end of the funding period of this Contract.

**Effect of Time of Drug Addition to HIV-Infected  
CEM Cells on Antiviral Activity (XTT)**

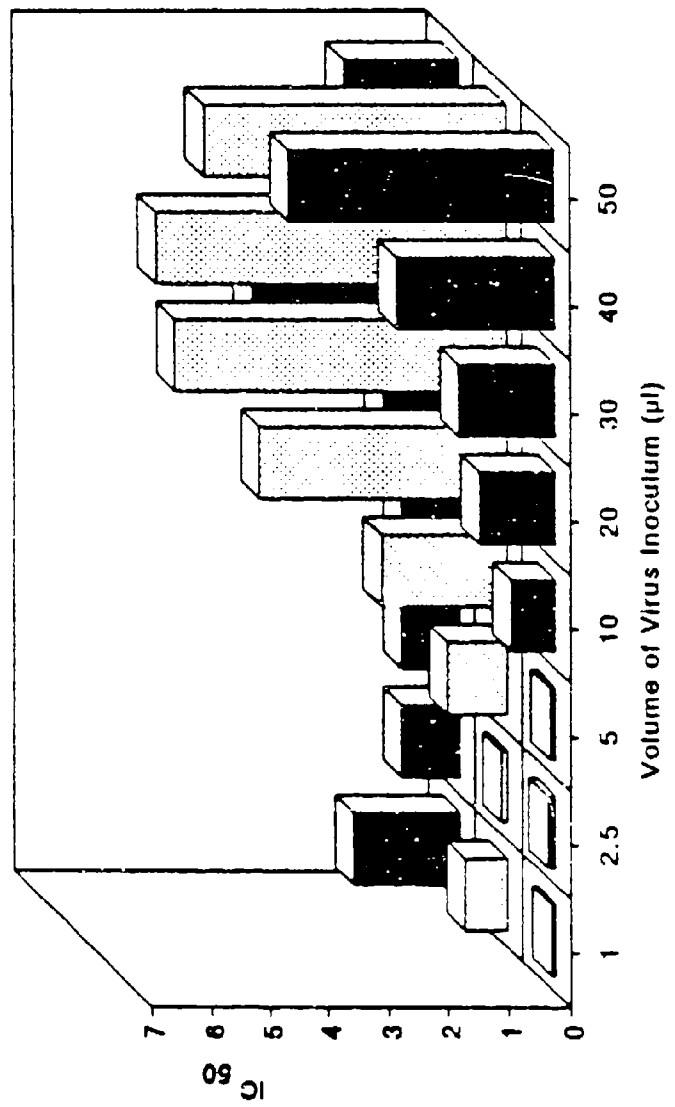


**Effect of Time of Drug Addition to HIV-Infected  
CEM Cells on Antiviral Activity (XTT)**

Figure 3

**Effect of Multiplicity of Infection on  
Antiviral Activity In CEM Cells (XTT)**

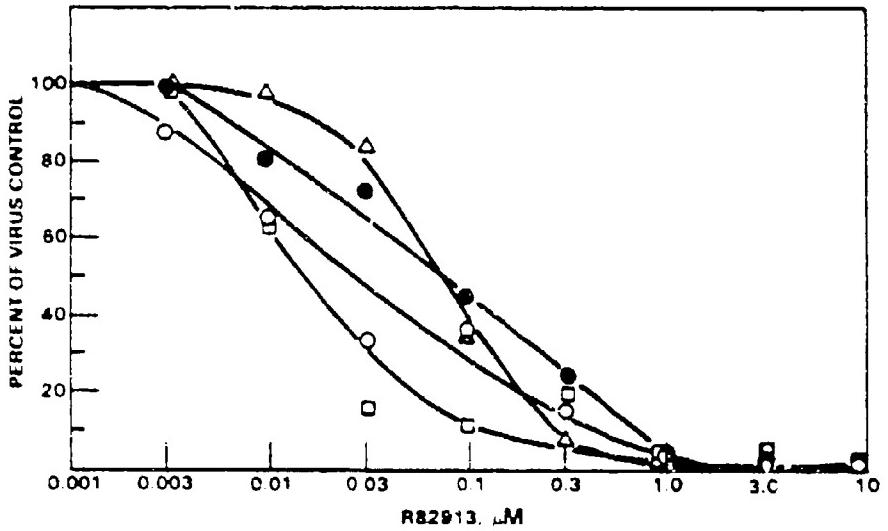
AVG 1603 (ng/ml)  
AVG 7081 (ng/ml x 100)



**Effect of Multiplicity of Infection on  
Antiviral Activity in CEM Cells (XTT)**

**Figure 4**

### SYNCYTIA REDUCTION ACTIVITY OF R82913



CEM cells were chronically infected with either HIV-1<sub>SF</sub> (● and △) or HIV-1<sub>RF</sub> (○). The effect of AZT on CEM-RF is shown for comparison (□).

Syncytium Reduction Activity of R82913

Figure 5

## 2. FeLV-FAIDS Variant

Selected compounds were requested to be tested against the FeLV. AVS 206, AVS 999 and AVS 2708 exhibited activity superior to the positive control, ddC with TI's of 13, 12 and 78, respectively. Dideoxycytidine (ddC) was tested in parallel as the positive control drug. These data are summarized in Table 11.

FAIDS assays were done in F81C cells. An active compound is defined here as having a (TI) of greater than 1.0 and a VR of 1.0 or greater. The VR is a measurement of selective antiviral activity which takes into account the degree of inhibition of virus-induced CPE and the degree of cytotoxicity produced by the test compound, determined by a modification of the method of Ehrlich *et al.*, (1965). The drug concentration which reduced the CPE by 50% (50% inhibitory dose, MIC<sub>50</sub>) was calculated using a regression analysis program for semilog curve fitting and is shown here in units of  $\mu\text{g}/\text{ml}$ . The TI is calculated by dividing the MTC<sub>50</sub> by the MIC<sub>50</sub>.

**Table 11**  
**Compounds Tested Against SAIDS Variant (FeLV)**

<u>AVS No.</u>	<u>VR</u>	<u>MIC<sub>50</sub></u> <u>(μg/ml)</u>	<u>MTC<sub>50</sub></u> <u>(μg/ml)</u>	<u>TI</u>
0206	3.0	25	320	13
0215	1.6	21	32	1.6
0222	1.6	48	32	0.7
0999	2.4	8.1	100	12
2280	1.2	240	> 320	> 1.3
2291	2.2	9.7	100	10
2397	1.8	51	100	2.0
2445	1.9	46	32	0.7
2448	1.2	-	320	-
2563	0.6	-	3.2	-
2574	1.3	29	32	1.1
2585	1.6	12	32	2.7
2587	1.7	12	32	2.6
2657	1.4	17	< 100	5.9
2708	4.7	1.3	100	78
2748	0.2	-	0.32	-
5010	1.1	171	100	0.6
5011	1.2	-	100	-
5013	0.6	-	320	-
5014	0.3	-	100	-
5015	0.2	-	100	-
5016	0.5	294	100	0.3
5017	0.2	-	100	-

Positive Control Drug (Typical Results)

2639(ddC)	2.7	1.0	10	10
	2.7	0.6	3.3	5.4

**3. SAIDS**

Selected compounds were requested to be tested against the Simian Retrovirus 2 (SRV2). Eighteen of the 24 compounds showed some antiviral activity. AVS-2576, 2996 and 2629 demonstrated significant anti-HIV activity with TI's of 635, 82 and 61, respectively. Dideoxycytidine (ddC) was tested in parallel as the positive control and produced a mean TI of 71 (based on 4 tests). These data are summarized in Table 12.

**Table 12**  
**Compounds Tested Against SAIDS (SRV2)**

AVS No.	Shipment	MIC <sub>50</sub> ( $\mu$ g/ml)	MTC <sub>50</sub> ( $\mu$ g/ml)	TI
5019	4A	100	> 320	> 3.2
5020	4A	179	> 320	> 1.8
5010	4A	-	> 320	-
5011	4A	-	> 320	-
5016	4A	-	> 320	-
5017	4A	-	> 320	-
5018	4A	-	> 320	-
5021	4A	-	320	-
2285		10.2	> 320	> 31
2576	19	0.5	> 320	> 635
2996	27	3.9	> 320	> 82
2629	19	1.6	< 100	61
0206	9	9.1	> 320	> 35
2708	22	10	> 320	> 32
2358	15	3.8	< 100	27
2397	16	13.6	> 320	> 24
2397 <sup>b</sup>	16	84.6	> 320	> 4
2574	19	14.7	> 320	> 22
2657	21	14.9	> 320	> 21
2445	18	4.8	< 100	21
2393	16	20.2	> 320	> 16
2353	11	27.6	> 320	> 12
2448	18	149.0	> 320	> 2
2340	13	320.0	> 320	> 1

Positive Control Data:

2639 (ddC)	3.4	> 10	> 3
	0.2	> 10	> 60
	0.1	> 10	> 181
	0.3	> 10	> 39

4. Murine Leukemia Virus (Rauscher)

Four compounds which demonstrated significant activity in the primary screen were tested against Rauscher murine leukemia virus *in vitro*. Dideoxycytidine (ddC, AVS-2639) was used as a positive control drug. The data is summarized in Table 13. AVS-1801 with an MIC<sub>50</sub> < 1.0  $\mu$ g/ml and a TI > 320 appeared to be more active than the positive control drug which had an MIC<sub>50</sub> of 1.2  $\mu$ g/ml and a TI > 80.5. AVS-1801 was retested to confirm activity. The dose range tested was increased by 2 log<sub>10</sub> to insure that an inactive dose level was tested. ddC was used as a positive control drug. AVS-1801 had an MIC<sub>50</sub> of 0.32  $\mu$ g/ml and a TI of > 1000. This data confirms the activity observed in the first experiment in which an MIC<sub>50</sub> of < 1.0  $\mu$ g/ml and a TI > 320 were obtained. The positive control drug, ddC, had an MIC<sub>50</sub> of 1.9  $\mu$ g/ml and a TI > 53. No significant cytotoxicity was observed with either drug.

**Table 13**  
**Compounds Tested Against Rauscher Murine Leukemia Virus (RMuLV)**

<u>AVS No.</u>	<u>MIC<sub>50</sub></u> ( $\mu$ g/ml)	<u>MTC<sub>50</sub></u> ( $\mu$ g/ml)	<u>II</u>	<u>Date</u>
1801	<1.0	>320	>320	08/04/89
1801	0.32	>320	>1000	12/05/89
3513	30.1	100	3.3	08/04/89
3939	157.9	>320	2.0	08/04/89
2353	2.0	>100	>49	01/12/88
2639*	1.2	>100	>80.5	08/04/89
2639*	1.9	>100	>53	12/05/89

\*Positive Control (ddC)

### C. Mechanism of Action

#### 1. HIV-1 Reverse Transcriptase Inhibition Screen with the Poly(rA)•p(dT)<sub>12-18</sub> Template

A summary of all compounds that inhibited HIV-1 reverse transcriptase when poly(rA)•p(dT)<sub>12-18</sub> was the template are given in Table 14. This is a cumulative summary since the beginning of the project. One hundred and seventeen (117) compounds were tested in this assay for their ability to inhibit HIV-1 reverse transcriptase. In addition to the 10 compounds listed below which inhibited the enzyme by more than 50% ( $ID_{50}$ ), there were two other compounds (AVS 5565 and 5566) which inhibited the enzyme but by less than 50%.

Table 14

Compounds Active in the HIV-1 Reverse Transcriptase Inhibition Screen  
with Poly(rA)•p(dT)<sub>12-18</sub> as the Template

AVS No.	$ID_{50}$ ( $\mu$ g/ml)	Activity in Cell Culture
5025	3	confirmed active
4732	22	inactive
6286	65	inactive
6287	85	active; one test
4075	89	confirmed active
4287	100	inactive; one test
4730	100	confirmed active
4734	100	inactive
5024	100	confirmed active
6283*	0.08 ( $\mu$ l/ml)	inactive

\*AVS 6283 is a syrup and it is not possible to differentiate effect of compound from that of solvent

The enzyme used for this screen was from a viral pellet of HTLV-IIIB which had been lysed by Triton X-100. The assay conditions were adjusted such that the template and the single deoxynucleotide substrate, thymidine 5'-triphosphate, were at saturating concentrations. This assay which uses a synthetic homopolymer template would be most efficient at measuring the ability of thymidine analogs to inhibit the polymerization reaction. This assay was replaced by the one described below in April of 1990.

#### 2. HIV-1 Reverse Transcriptase Inhibition Screen with the Ribosomal RNA Template

In April of 1990 we started using ribosomal RNA template in our HIV-1 reverse transcriptase inhibition screen instead of the poly(rA)•p(dT)<sub>12-18</sub> template. All compounds that were active in the assay when ribosomal RNA was used as the template are listed in Table 15. To date there have been 58 compounds assessed in this assay. AVS 6779, 7590, 8524, 8525, and ST 704 inhibited HIV-1 reverse transcriptase by less than 50% at the highest concentration tested.

Table 15  
Compounds Active in the HIV-1 Reverse Transcriptase Inhibition Screen  
with Ribosomal RNA as the Template

AVS No.	ID <sub>50</sub> ( $\mu$ g/ml)	Activity in Cell Culture
8520	0.0007	confirmed active
7891	0.003	confirmed active
AM 612	0.1	confirmed active
6511	0.11	confirmed active
6512	0.14	confirmed active
AM 669	0.51	inactive
AM 242	1.2	confirmed active
4032	4.2	confirmed active
6510	4.3	confirmed active
ST 686	5.5	inactive
4035	8	confirmed active
6505	18	minimal activity; one test
1761	19	minimal activity; one test
4036	23	confirmed active
8308	27	confirmed active
ST 725	95	minimal activity; one test

The enzyme used for this screen was from a strain of HIV-1 that produces high extracellular levels of reverse transcriptase (SK1 strain). The virus was grown in CEM cells, pelleted, lysed with Triton X-100, and partially purified by affinity column chromatography. The assay contains the ribosomal RNA template and three of the deoxynucleoside 5'-triphosphates, dGTP, dCTP, and dATP, at saturating concentrations. The fourth deoxynucleotide, thymidine triphosphate, which contains the radioactive label is present at a concentration about twice the K<sub>m</sub> value.

Five compounds are more active than AZT-TP (ID<sub>50</sub> of 0.18  $\mu$ g/ml) in this assay. Suramin, a non-deoxynucleotide reverse transcriptase inhibitor, has an ID<sub>50</sub> of 17  $\mu$ g/ml. Six additional compounds would fall in the activity range between AZT-TP and suramin. Nine of these eleven compounds showed antiviral activity in the cell culture assays. One of the inactives, AM 669, was toxic to the cells at all concentrations tested. Since we switched to the ribosomal RNA template in April there have been a higher percentage of reverse transcriptase inhibitors as well as a better correlation between reverse transcriptase inhibition and antiviral activity in cell culture. This could be a result of the new template or a change in the type of compounds being submitted for testing.

### 3. Evaluation of the Reverse Transcriptases From Other Retroviruses as Surrogates for HIV-1

During the early stages of this program we tested compounds for their ability to inhibit the reverse transcriptase from two other retroviruses: avian myeloblastosis virus (AMV) and Moloney murine leukemia virus (MuLV). Early in the AIDS epidemic, several investigators were using the reverse transcriptases from these two viruses to screen compounds as potential anti-HIV agents. These two reverse transcriptases were easily obtainable whereas the reverse transcriptase from HIV-1 was not. The

assay for all three viruses was similar and used the poly(rA)•p(dT)<sub>12-18</sub> template. This part of the project was terminated early in 1990. Sixty compounds were screened against the reverse transcriptases from both HIV-1 and AMV; twenty-eight of those were also tested against Moloney MuLV reverse transcriptase. Five compounds (AVS 5025, 4732, 4730, 4734, and 5024) that inhibited HIV-1 reverse transcriptase were tried against AMV reverse transcriptase. Three (AVS 4732, 4734, and 5024) did not inhibit AMV reverse transcriptase. AVS 5024 was the only one of the five HIV-1 reverse transcriptase inhibitors screened against Moloney MuLV reverse transcriptase. It was very active with an ID<sub>50</sub> of less than 10 µg/ml. Of the fifty-five compounds that did not inhibit HIV-1 reverse transcriptase, eleven inhibited AMV reverse transcriptase. Six of these also inhibited the Moloney MuLV reverse transcriptase. Ten compounds inhibited Moloney MuLV reverse transcriptase but failed to inhibit either the HIV-1 or AMV reverse transcriptases. The reverse transcriptases from AMV and Moloney MuLV can not substitute for the enzyme from HIV-1, at least when synthetic homopolymer templates are used in the assays.

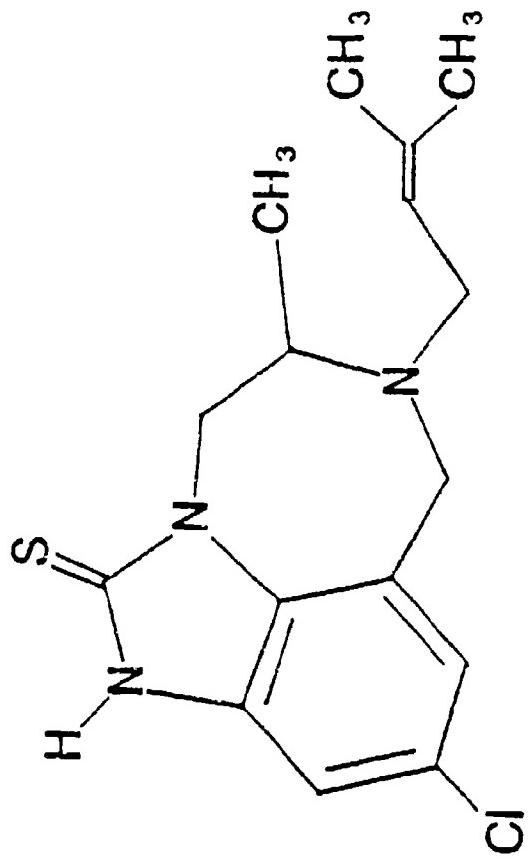
#### **4. Evaluation of Two TIBO Derivatives**

Recently, a novel series of non-nucleoside compounds, derivatives of tetrahydro-imidazo[4,5,1-jk][1,4]-benzodiazepin-2(1H)-one and thione (TIBO), have been shown to have potent and selective activity against human immunodeficiency virus type 1 (HIV-1) in cell culture Pauwels *et al.*, (1990). The authors concluded that their TIBO derivatives were acting by a "reverse transcriptase-associated process." They showed a statistical correlation for a series of TIBO derivatives between the IC<sub>50</sub> in cell culture and the ID<sub>50</sub> for inhibition of HIV-1 reverse transcriptase. On the synthetic homopolymer templates, these compounds had ID<sub>50</sub> values at least 50 times that of their cell culture antiviral activity which raised questions about reverse transcription being the most sensitive target for these compounds *in vivo*. R82913, (+)-S-4,5,6,7-tetrahydro-9-chloro-5-methyl-6-(3-methyl-2-butenyl)-imidazo[4,5,1-jk][1,4]-benzodiazepin-2(1H)-thione (Figure 6), was the most active of the TIBO derivatives described by Pauwels *et al.* We have recently tested this TIBO derivative in our assay with the ribosomal RNA template and found that it has an ID<sub>50</sub> (0.002 µg/ml) that is lower than the cell culture antiviral 50% endpoint. A second TIBO derivative (R86183) has an even lower ID<sub>50</sub> value (0.0007 µg/ml; Table 16). This is a new analog which was not included in the series studied by Pauwels *et al.*

**Table 16**

Inhibition of HIV-1 Reverse Transcriptase  
by AVS 7891 (R82913), AVS 8520 (R86183) and AZT-TP

Template	AVS 7891	AVS 8520	AZT-TP	ID <sub>50</sub> (µg/ml)
ribosomal RNA	0.002, 0.004, 0.002	0.0007	0.177	
gapped duplex DNA	0.483	0.016	0.532	
poly(rA)•p(dT) <sub>12-18</sub>	2.80, 2.35	n.d	0.015	



R82913

(+)-S-4,5,6,7-tetrahydro-9-chloro-5-methyl-6-(3-methyl-2-butenyl)-imidazo[4,5,1-ik][1,4]benzodiazepin-2(1H)-thione

Structure of R82913

Figure 6

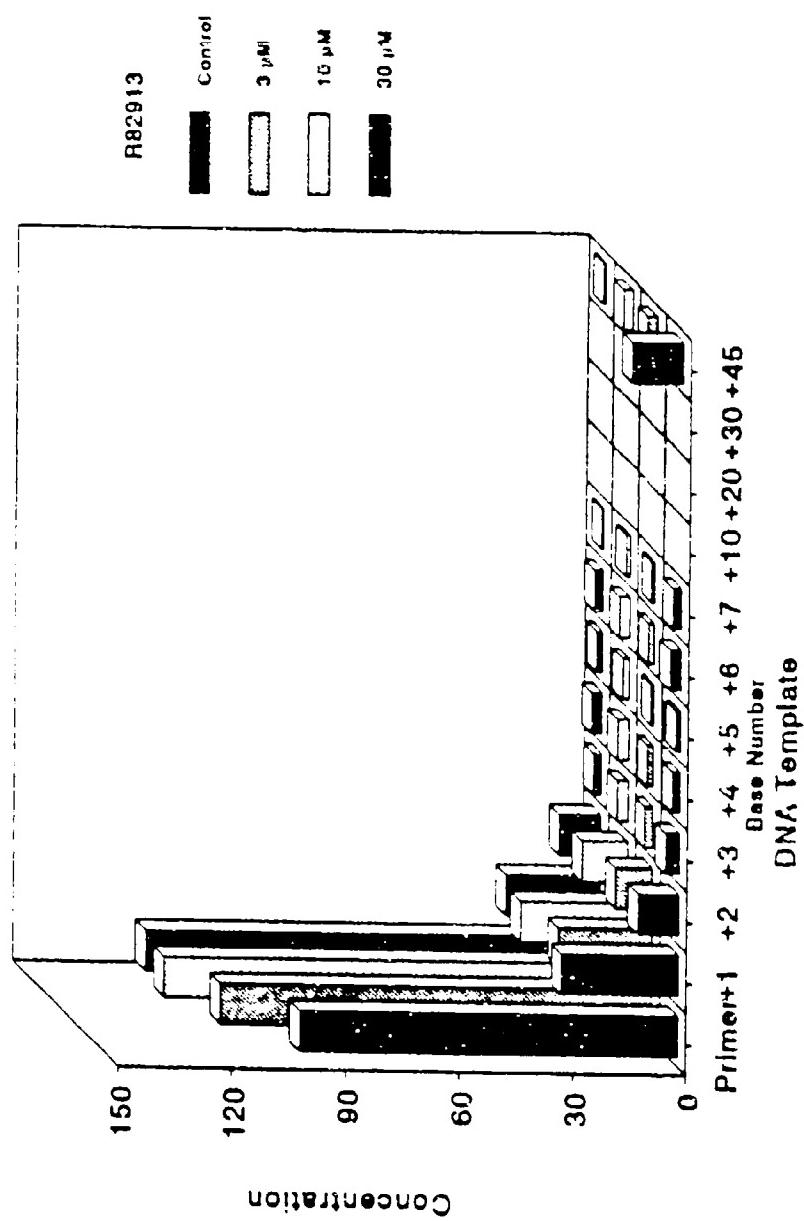
The data on R82913 has been accepted for publication in *Antiviral Research*, White *et al.*, (1991). To facilitate comparison with the data in this paper the following data has been converted to  $\mu\text{M}$  units. R82913 was 20-fold more potent than AZT-TP in the inhibition of HIV-1 reverse transcriptase in an assay using a natural template (ribosomal RNA) that more accurately resembles native viral RNA than a synthetic homopolymer. With this template, R82913 inhibited HIV-1 reverse transcriptase with an  $ID_{50}$  ( $0.01 \mu\text{M}$ ) that was equal to, or lower than, the  $IC_{50}$  for this compound in all of our cell culture assays ( $0.01 - 0.55 \mu\text{M}$ ). When gapped duplex DNA was used as the template, R82913 inhibited HIV-1 reverse transcriptase with an  $ID_{50}$  of  $1.3 \mu\text{M}$ .

Unlike nucleoside analogs, the mechanism by which these novel compounds inhibit reverse transcription is not immediately obvious. R82913 was not competitive with any of the deoxynucleotide triphosphates, nor did it act as a substrate for the enzyme. HIV-1 reverse transcriptase was incubated with 0, 3, 9, or  $30 \mu\text{M}$  R82913. The primer/template used in the reaction was a  $^{32}\text{P}$ -labeled 15 base oligomer annealed to a 47 base template. Ten  $\mu\text{l}$  samples from each incubation were removed at 0, 7.5, 15, 30, and 60 minutes, and the products of the reaction were separated from the original primer by electrophoresis through a 15% polyacrylamide gel containing 7 M urea. The position of the  $^{32}\text{P}$ -labeled bands were determined by autoradiography and then quantitated with a densitometer (Figure 7). As expected, incubation with R82913 inhibited extension of the primer. The pattern of products in the TIBO containing reactions indicated that the inhibition was not by competition with any of the deoxynucleotides. Furthermore, R82913 inhibited the production of the longer products more than it did the shorter products. Preincubation of R82913 with the enzyme did not change this result, suggesting that R82913 did not bind to the enzyme and prevent binding of the template/primer.

Initial studies indicate that the compound was not reversibly competitive with either the RNA or DNA template. Double reciprocal plots for the RNA template (Figure 8) and the DNA template (Figure 9) show two different patterns of inhibition for R82913 with respect to the template. The RNA template data most closely resembles an uncompetitive type of inhibition. In three separate experiments  $K_i$  values of 0.05, 0.07, and  $0.09 \mu\text{M}$  were obtained. An uncompetitive inhibitor is one which decreases the  $K_m$  and  $V_{max}$  to the same extent. In contrast, the DNA template data most closely resembles mixed type of inhibition. The  $K_i$  for R82913 is  $0.2 \mu\text{M}$ . This type of inhibitor also affects both the  $K_m$  and  $V_{max}$  values but to different degrees. Both types of inhibition imply that the enzyme, template, and R82913 are bound together in some type of tertiary complex.

As expected from the lack of antiviral effect in cell culture on HIV-2, neither TIBO derivative inhibits the reverse transcriptase from HIV-2. Both compounds were tested at concentrations up to  $100 \mu\text{g/ml}$  in an assay with the ribosomal RNA template. The assay conditions were identical to those used for HIV-1 reverse transcriptase and may not be optimum for the enzyme from HIV-2.

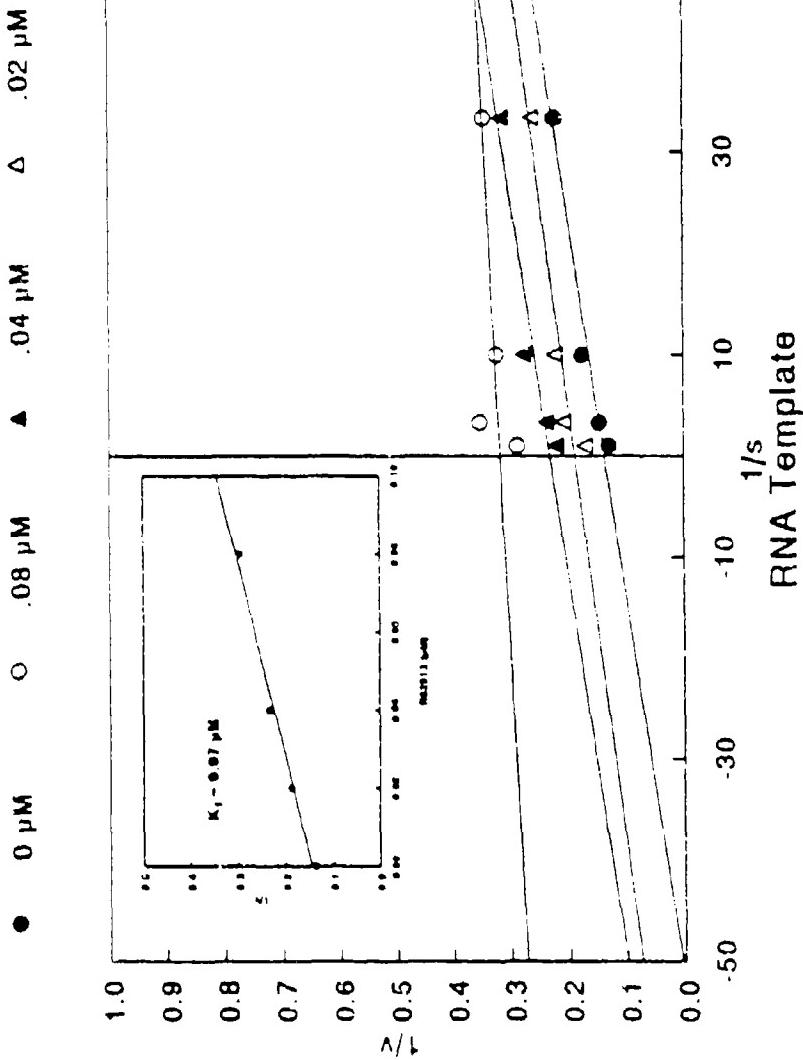
### Effect of R82913 on the Ability of HIV-1 RT to Extend the DNA Chain



Effect of R82913 on the Ability of  
HIV-1 RT to Extend the DNA Chain

Figure 7

# R82913

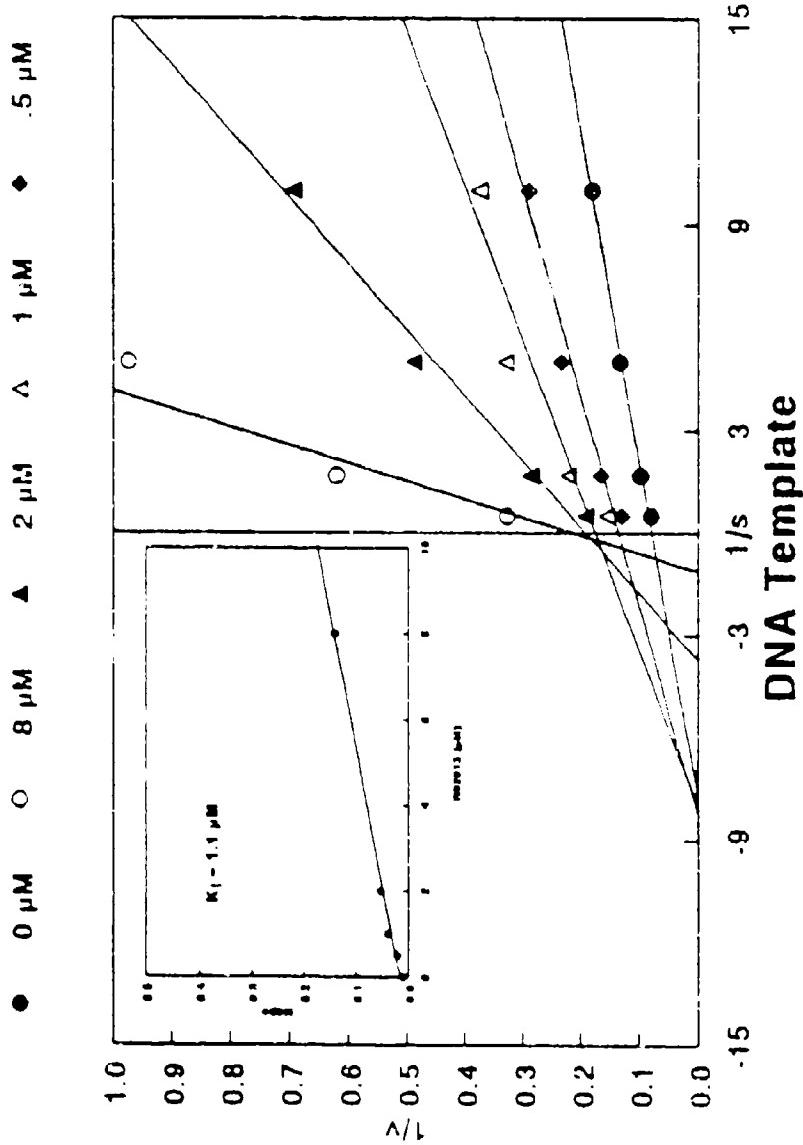


Inhibition of HIV-1 RT by R82913 on the RNA Template

Figure 8

53

# R82913



Inhibition of HIV-1 RT by R82913 on the DNA Template

Figure 9

D. In Vivo Models

1. Murine Models

Table 17 lists the agents which have been entered into *in vivo* murine models of retroviral disease. Mice were treated from day -1 through day 13 (IP, qd) or on other schedules for selected agents, and they were sacrificed on day 14. Spleen weights were recorded, and sera were collected for quantitation of viremia (by UV-XC assay) and reverse transcriptase.

Table 17

Agents Entered into *In Vivo* Murine Models of Retroviral Disease

AVS 0001 (Ribavirin)	AVS 5599 (Diethyl thiocarbamate or DTIC or Immuthiol)
AVS 0206 (Ribamidine)	AVS 5909 (Dideoxy inosine (ddI))
AVS 0598	AVS 6005 (Acemannan or Carrisyn)
AVS 0999	AVS 6170 (AIT 0080)
AVS 1603 (AZT)	AVS 6171 (AIT 0082)
AVS 1759 (MVE-1)	AVS 6172 (AIT 0083)
AVS 1761 (Poly[I,C]-LC)	AVS 6173 (AIT 0109)
AVS 1767 (AM-3)	AVS 6278 (BM 21.1160)
AVS 1790 (MVE-4)	AVS 6279 (BM 21.1162)
AVS 1792 (MVE-2)	AVS 6280 (BM 41.209)
AVS 1801	AVS 6281 (BM 41.237)
AVS 1850	AVS 6283 (Virucide-3)
AVS 1968 (CL 246,738 or acridine HCl)	AVS 6285 (P30 protein)
AVS 2639 (Dideoxy cytidine (ddC))	AVS 6286 (PharmaService-2)
AVS 2145 (Ampligen)	AVS 6287 (PharmaService-1)
AVS 2575 ( $K_7BVW_{11}O_{40}$ )	AVS 6288 (Spirogermanium)
AVS 2576 ( $K_6BVW_{11}O_{40}$ )	AVS 6289 (DDG-1 or 2'-F-ddAraA)
AVS 2996	AVS 6293 (DD'-92 or 5-F-ddC)
AVS 3513	AVS 6505 (PSK or Krestin)
AVS 3939	AVS 6510
AVS 4075	AVS 6511
AVS 4594/5027 (Imexon)	AVS 6512
AVS 4596 (LCP-100)	AVS 6775 (AV-215)
AVS 4730 (Polyacrylic acid)	AVS 6776 (THF-2)
AVS 4732 (Ascorbate germanate)	AVS 7297 (BBR1957)
AVS 5019	AZT - ddI dimer
AVS 5020	D4C (2',3'-Dideoxydidehydrocytidine)
AVS 5025L (Poly [maleic acid anhydride cyclohexyl dioxopene])	Soluble glucan
AVS 5048 (purified 0999)	AZT + ddC
AVS 5073 (ELS-1)	AZT + Imexon
AVS 5074 (ELS-2)	AZT + MVE-2
AVS 5418 (BM 50.06812)	AZT + poly[I,C]-LC
AVS 5587 (7-thia-8-oxoguanosine)	MVE-2 + indomethacin Ribavirin + Imexon

Many of these agents have shown some antiviral activity. Among the most effective antiviral agent was AZT, which has served as the positive control in subsequent studies. AZT reduced splenomegaly in the RMuLV model and virtually eliminated viremia at a dose (IP, qd) of 100 mg/kg. The *in vivo* therapeutic index of AZT exceeded 5. Although Ribavirin and AVS 206, its amidine analog, both showed activity (therapeutic indices = 2.1 and 2.5, respectively), neither completely inhibited splenomegaly. However, further studies strongly suggested that ribavirin has even greater antiviral activity *in vivo* in the RMuLV model than AZT, which has served as the positive control in previous studies. Even more striking than the prophylactic antiviral activity of ribavirin was the observation that the antiviral activity of the drug did not diminish even when the initiation of treatment was delayed until five days after virus inoculation. We have demonstrated previously that virus production and viremia are well established by five days after infection, so these studies establish the therapeutic efficacy of ribavirin in this model. In contrast, AZT rapidly lost its antiviral effect when treatment was delayed.

The two related proprietary compounds, AVS 2575 and 2576, produced moderate activity at doses approaching the level of physiological toxicity. For the BRM MVE-2 and MVE-4, the treatment regimen was critical for therapeutic efficacy. Doses in the lower range were more effective, and prophylactic rather than therapeutic administration was essential for antiviral effect. Combination regimens with AZT and MVE-2 produced additive, but not synergistic activity.

Imexon also significantly reduced splenomegaly at doses (IP, qd) of 90 mg/kg or higher, whether administration was begun one day before or four hours after virus inoculation. Imexon also reduced virus titers, but not to the same extent as AZT. However, the combination of AZT and Imexon produced an antagonistic effect, particularly at low doses (10-60 mg/kg) of Imexon. Statistical analysis using a multiple linear models procedure revealed that this antagonism was significant at the  $p=0.0003$  level. Similarly, the combination of Ribavirin and Imexon did not produce any additional therapeutic benefit. However, imexon by itself had significant therapeutic activity even when administration of the drug did not begin until 7 days after virus inoculation, by which time virus infection was well established. Imexon was also significantly effective when administered orally at doses of 110 and 220 mg/kg, qd. Additionally, the effect of imexon on the survival of RMuLV-infected mice was tested. Imexon produced little, if any, extension of survival in animals infected with a lower dose of virus, but the drug appeared to shorten the survival of mice infected with a higher dose of virus (Table 18).

**Table 18**  
Effect of Imexon on Survival of RMuLV-Infected Mice

<u>Route of Virus Admin.</u>	<u>Dilution of Virus</u>	<u>Treatment (day 3-13)</u>	<u>Dose (mg/kg)</u>	<u>Med. Surv.- Time (days)</u>	<u>Alive at day 114</u>
IV	Neat	Placebo		90	4/11
IV	Neat	Imexon	170	13	3/12
IP	Neat	Placebo		73	3/10
IP	Neat	Imexon	170	48	3/10
IV	1:3	Placebo		82	2/10
IV	1:3	Imexon	170	87	3/10
IP	1:3	Placebo		102	3/10
IP	1:3	Imexon	170	103	3/10

Further studies on the therapeutic activity of imexon in the RMuLV model *in vivo* were performed. We examined the efficacy of repeated rounds of imexon treatment interspersed with rest periods. Imexon treatment was given either every other week (one week on treatment, one week off) or every third week (one week on, then two weeks off). Two different dosing regimens were applied on both of these schedules: 110 mg/kg, qd, IP or 170 mg/kg, q2d, IP, and the treatment regimens were maintained for eleven weeks. The effect of imexon treatment on survival of infected animals was recorded. Either dose of imexon prolonged survival in mice treated every other week. Median times to death were: 49 days for placebo and 119 days for either imexon dose. This represents about a 2.5-fold increase in the median survival, and 40% of the animals treated with the higher dose of imexon are still alive. When imexon treatment was given every third week, the results were somewhat different. Imexon seemed not quite as effective when given less often. Median times to death were: 52.5 days for placebo, 98 days for the lower dose, and 35 days for the higher dose. The reduction in survival among the animals treated with imexon at 170 mg/kg could have been due to exacerbation of disease or to toxicity. In addition to this reduction in survival, other suggestions of toxicity, notably severe neurotoxicity characterized by loss of voluntary motor control in the limbs, were noted among several imexon-treated mice. These animals had to be sacrificed because they could not eat or drink water. Clearly, however, imexon treatment every other week did improve survival of RMuLV-infected mice.

Additionally, the efficacy of imexon in the LP-BM-5 model was examined. Mice were treated IP daily on days 3 through 27 with AZT (100 mg/kg) or imexon at 70, 110 or 170 mg/kg, and they were sacrificed on day 28. Single-cell suspensions of splenocytes were prepared and assayed for virus production in an infectious centers assay, a variant of the UV-XC assay in which viable spleen cells, rather than serum, serve as the source of virus. This assay is necessary because viremia is not characteristic of the LP-BM-5 model. As shown in Table 19, imexon reduced splenic cellularity (cells/spleen) in a dose-dependent fashion, with an

**Table 19**  
**Effect of imexon on LP-BM-5 Virus Replication in Spleen**

Treatment (d 3 to 27)	Dose (mg/kg)	Cells/spl. (X 10 <sup>6</sup> )	PFU/10 <sup>7</sup> spl. cells	PFU/spl. (X 10 <sup>3</sup> )
No virus		100	6	
PBS		140	2.4 x 10 <sup>4</sup>	3.4
Imexon	70	75	3.3 x 10 <sup>4</sup>	2.5
Imexon	110	45	4.6 x 10 <sup>4</sup>	2.1
Imexon	170	7.5	2.3 x 10 <sup>5</sup>	1.8
AZT	100	180	7.4 x 10 <sup>3</sup>	1.3

almost twenty-fold reduction at the highest dose of imexon. Conversely, in a dose-dependent fashion imexon also increased the number of infected cells (plaque-forming units, or PFU) on a per cell basis (PFU/10<sup>7</sup> spleen cells), with an almost ten-fold increase at 170 mg/kg. The net result of these changes was that imexon reduced the number of infected cells (PFU)/spleen in a dose-dependent manner, with a reduction of almost 50% at 170 mg/kg. In contrast, AZT had only a slight effect on splenic cellularity, but decreased the number of infected spleen cells by about two-thirds whether expressed on a per cell or per spleen basis. Additional cohorts of mice from this experiment were held for survival analysis. Results are shown in Table 20. Although median survival increased in all groups of treated mice,

**Table 20**  
**Effect of Imexon on Survival of LP-BM-5 Infected Mice**

Treatment (d 3-27)	Dose (mg/kg)	MST (days)	Range (days)	% Alive at day 196	P Value (vs. PBS)
PBS		117	83-152	0	
Imexon	70	141	128->196	20	0.247
Imexon	110	130	108->196	20	0.282
Imexon	170	170	115->196	20	0.0376
AZT	100	145	83->196	40	0.193

only mice treated with the highest dose of Imexon showed statistically significant increases in survival by the Cox-Mantel test. Thus in the LP-BM-5 model as well as in the RMuLV model Imexon has

significantly prolonged survival of retrovirus-infected mice. However, these results with imexon add a cautionary note because results in two different murine retrovirus *in vivo* models thus suggest that imexon may actually exacerbate disease in some circumstances. Therefore, caution would be indicated in considering imexon as a candidate for clinical development in AIDS treatment.

DDC showed good antiviral activity in the RMuLV model *in vivo* only at very high concentrations ( $\geq 300$  mg/kg), but in this dose range ddI had no antiviral activity. These studies have been repeated with higher doses of ddI, and ddI had good antiviral activity at 1000 mg/kg. Animals were treated from day -1 through day 13 (IP, qd), and they were sacrificed on day 14. Spleen weights were recorded, and sera were collected for quantitation of viremia (by UV-XC assay) and reverse transcriptase. It should be emphasized again that even at these high drug concentrations no gross evidence of toxicity was noted, either in behavior or in body weight. We and others have previously reported that AZT shows better antiviral activity if treatment is given prophylactically (treatment begun before virus inoculation) rather than therapeutically (treatment begun after virus inoculation). The effect of delaying the onset of ddC treatment in RMuLV-infected mice was examined. Mice treated prophylactically (beginning one day before virus inoculation) with ddC were virtually indistinguishable from uninfected mice by any of the measures (splenomegaly, viremia, or serum RT). When the initiation of ddC treatment was delayed, splenomegaly and serum RT rose gradually, but were still only slightly above uninfected controls. However, viremia rose sharply to a plateau if treatment did not begin until the day of virus inoculation (day 0) or afterward. Nonetheless, even when treatment did not begin until a week after virus inoculation, by which time splenomegaly and viremia are readily apparent in untreated mice, ddC still reduced viremia by about 30-fold. These findings show that ddC is still effective therapeutically, but not to the same degree as prophylactically.

These results raised the question of whether a single administration of a drug early in the disease course might also be effective, possibly by inhibiting some critical early step in the infectious process. In order to examine this possibility, RMuLV-infected mice were given a single administration of ddC or AZT at various times. A single administration of ddC (1000 or 2500 mg/kg) had little or no antiviral effect at any time tested. In contrast, a single dose of AZT, especially at 250 mg/kg, was effective if given on day 0 or day 3. A result this striking demanded confirmation, which two repeats of this experiment failed to provide. Therefore, one must conclude that the original result was a fluke and that a single administration of ddC or AZT does not have antiviral activity in this system. Single administration of Imexon was also examined, and a transient antiviral activity, detectable for only one day after treatment, was noted.

DDC was also active by the oral route in drinking water with an ED<sub>50</sub> of around 300 mg/kg, a dose similar to the ED<sub>50</sub> for intraperitoneal administration. Curiously, however, when doses of oral ddC in drinking water were increased above 300 mg/kg, toxicity which had not previously been seen with intraperitoneally administered ddC was observed. Mice became extremely agitated, behavior which suggested neurotoxicity. Since peripheral neuropathy has been commonly reported as the primary dose-limiting toxicity of ddC in AIDS patients, this phenomenon may represent a small-animal model for peripheral neuropathy.

The effectiveness of the combination of AZT and ddC in the RMuLV model *in vivo* was also examined. Mice were treated from day -1 through day 13 with AZT, ddC or the combination of the two drugs. The combination of the two agents appeared to be more effective than treatment with either single agent at these doses. The data from this experiment were analyzed statistically with the Dose-Effect Analysis program of Chou and Chou (Elsevier Biosoft). This program analyzes the dose-response

surfaces and constructs isobolograms from combination studies for evidence of synergistic or antagonistic interactions. A complex pattern emerged from this analysis. Both synergistic and additive interactions were seen at certain ratios of AZT to ddC. Especially for splenomegaly, synergy was seen at virtually all AZT/ddC ratios. For both viremia and serum RT, strongly synergistic interactions were found at a 1:3 ratio of AZT to ddC, but only additive to subsynergistic effects at a 1:10 ratio. These results are consistent with data from Baba *et al.* (1987) on the inhibition of HIV replication *in vitro* by the combination of AZT and ddC. That study reported additive to subsynergistic interactions between the two drugs. Evidence that these dideoxynucleosides, which have proven activity against HIV and are undergoing clinical trials, have antiviral activity in the RMuLV model helps to validate this murine retrovirus model in AIDS drug development. The murine *in vivo* models can be especially useful in providing guidance for clinical trials, especially in terms of scheduling and drug combinations.

Progress was made in characterizing the LP-BM-5 model. Viremia could not be detected at any time tested, from 24 hours up to 14 weeks after virus inoculation. However, 2 weeks after infection, virus production in the spleen could be readily detected with an infectious centers assay (Table 21). Dramatic rises in splenic cellularity and in the number of infected

Table 21  
Production of LP-BM-5 Virus by Spleen Cells

Wk after Infection	Cells Spleen ( $\times 10^6$ )	PFU/ $10^7$ Spleen Cells	PFU/spleen ( $\times 10^3$ )
1	N.D.	0	0
2	92	7100	65
3	55	2000	23
14	160	15,000	250

N.D. = not determined

PFU = plaque-forming units

spleen cells were evident 3 months after infection. It should also be noted that, in contrast to published reports from Mosier *et al.* (1987), LP-BM-5 infection did not prove fatal in our hands. At the same time, we examined the effect of LP-BM-5 infection on immune function. Splenic NK activity was depressed 3 months after infection, and it was not boosted by a single IP injection of the BRM poly(I,C)-LC at 10  $\mu$ g/animal 48 hours before the assay, as was the NK activity of uninfected mice. Similarly, CTL activity was also depressed then. These animals also had significantly increased serum immunoglobulin levels. These findings indicate that, even in the absence of detectable viremia, the LP-BM-5 model can serve as a useful secondary screen for agents which show antiviral activity in the primary RMuLV screen. Virus production by spleen cells, immune function, and serum immunoglobulin levels can all be measured as indicators of antiviral activity in this system.

The possible efficacy of HP-5, a hemoregulatory peptide which stimulates bone marrow progenitor cells and which has activity by the oral route, in alleviating the established hematopoietic toxicity of AZT was investigated. Mice were given a high dose of AZT (2.5 mg/ml) in drinking water

for 21 or 42 days. The ability of HP-5, administered i.v. at 1.2 ng/kg (the optimal dose) on days 21-23, to overcome the anemia induced by AZT was measured at various times. HP-5 produced a transient rise in red blood cell numbers (as well as hemoglobin levels and hematocrit), but the long-term effects in animals receiving AZT continuously may have been deleterious.

A series of studies was undertaken to evaluate the relationship between augmentation of natural killer (NK) cell activity and the antiviral activity of several biological response modifiers (BRM) which are interferon inducers. Uninfected and RMuLV-infected mice were treated with BRM on various schedules, and NK and antiviral activity were assessed two weeks after infection. CL 264,738 had antiviral activity when given prophylactically, but not therapeutically, while the opposite was true for Ampligen. Poly [I,C]-LC had antiviral activity both therapeutically and prophylactically, but therapeutic activity was much greater than prophylactic activity. In fact, RMuLV-infected mice treated with poly [I,C]-LC therapeutically were not significantly different from uninfected mice by any of the three measures of viral disease, and no infectious virus was detected in serum. When antiviral activity was compared with augmentation of splenic NK activity, a consistent pattern emerged for these BRM and all others tested, namely that antiviral activity always correlated with augmentation of NK activity in infected animals. For instance, CL 264,738 boosted NK activity in infected mice treated prophylactically, but not therapeutically. Similarly, poly [I,C]-LC augmented NK activity much more in infected mice treated therapeutically than prophylactically. BRM such as soluble glycan, which did not boost NK activity in infected mice did not demonstrate antiviral activity. In contrast, augmentation of NK activity in uninfected mice bore no relationship with antiviral activity. For example, soluble glycan boosted NK activity in uninfected mice, but depressed NK activity in infected mice. These results suggest a causal role for the augmentation of NK cell activity in the antiviral efficacy of these BRM in this model.

In order to test whether NK cells are directly involved in the antiviral activity of these biological response modifiers (BRM), mice were treated with poly[I,C]-LC (AVS 1761), an interferon inducer with good antiretroviral activity, and with rabbit antibody to asialo GM<sub>1</sub>, a ganglioside on the surface of murine NK cells, to deplete NK activity. In the initial experiment anti-asialo GM<sub>1</sub> eliminated NK activity in uninfected mice, but did not affect NK activity in infected mice. Similarly, antiviral activity was not affected by anti-asialo GM<sub>1</sub> treatment. The experiment was repeated with more frequent administration of higher doses of antiserum, and NK activity in infected and uninfected mice was eliminated. Similarly, anti-asialo GM<sub>1</sub> treatment eliminated the antiviral activity of poly [I,C]-LC as measured by splenomegaly and viremia. Some antiviral activity of poly [I,C]-LC was still detectable as judged by serum RT levels after anti-asialo GM<sub>1</sub> treatment. Because poly [I,C]-LC is an established interferon inducer, serum interferon levels were measured to determine if interferon induction is responsible for the antiviral effect of poly [I,C]-LC. However, serum interferon levels were not reduced by anti-asialo GM<sub>1</sub> treatment even though antiviral activity and NK augmentation were eliminated. These findings suggest that interferon is not directly involved in the antiviral action of poly [I,C]-LC, but that NK may mediate the antiviral effect of poly [I,C]-LC, but that augmentation of splenic NK activity by poly[I,C]-LC is critical for its antiviral activity. Therefore, NK cells may play a key role in resistance to this retrovirus.

We have also tested a series of protease inhibitors *in vitro* in the RMuLV model. Three compounds have shown consistent antiviral activity in the RMuLV model *in vivo* as well as against HIV and simian immunodeficiency virus (SIV). Lysates were prepared from infected cells treated with these compounds, and these lysates were analyzed for production of RMuLV proteins by Western blotting in the laboratory of Dr. Dennis Lambert at SmithKline Beecham. The same compounds inhibited production of p30 protein of RMuLV. Infected, treated cells were also examined by electron microscopy in the laboratory of Dr. Mary Beth Downs at USAMRIID. The same compounds virtually eliminated production of virions, but other compounds which did not show activity in other tissue culture

assays reduced, but did not eliminate the production of virions. With these compounds many empty nucleocapsids were seen. The truly striking result with these compounds was the similarity in their antiviral activity against three different retroviruses: HIV-1, SIV, and RMuLV. The same three compounds were active against all these retroviruses, with similar median effective concentrations *in vitro*.

## 2. Simian Models

### a. Pathology Of SIVsm/pbj

Although both adults and juvenile Rhesus monkeys become infected by SIVsm/pbj, only juveniles die during the acute stage of the disease. Diarrhea and lymphopenia ( $< 500/\mu\text{l}$ ) are observed by 7 days postinoculation. Death, precluded by metabolic acidosis ( $\text{pH} < 7.1$ ), occurs by 10 days post inoculation. Necropsy of SIVsm/pbj infected monkeys revealed lesions of the hemolymphatic system and gastrointestinal tract. Although there was generalized lymphadenopathy, gut-associated-lymphoid-tissue and mesenteric lymph nodes were most severely enlarged with the latter measuring 10-40X the normal percentage of total body weight. All lymphoid organs and gut-associated-lymphoid-tissue had similar histologic changes including hyperplasia of T-cell areas containing up to 50% lymphoblasts, atrophy of B-cell areas and scattered multinucleated cells. T-cell areas consisted almost exclusively of CD-8 positive cells. In rhesus macaques immunohistochemistry demonstrated SIV antigen-positive lymphocytes and multinucleated cells in gut-associated-lymphoid-tissue (5-40/high powered field (HPF)), mesenteric node (1-30 HPF), and spleen (1-20 HPF) but not in the axillary nodes. By contrast pigtailed and cynomolgus macaques generally had greater than 30/HPF in all lymphoid tissues. Grossly in Rhesus monkeys the GI tract had multifocal submucosal edema with hyperemia and erosion of the mucosa in addition to prominently enlarged Peyer's Patches. Histologic changes away from gut-associated=lymphoid-tissue included villus subepithelial vesicles progressing to severe multifocal villus blunting and fusion. Diffusely there were increased numbers of lymphoid cells in the lamina propria. Multifocal infiltrates of neutrophils and multinucleated cells were present along with crypt disruption and/or loss. Antigen-positive lymphocytes and multinucleated cells were observed throughout the lamina propria and were most numerous (50/HPF) in foci with crypt disruption. However, neither viral antigens nor viral particles were detected in enterocytes. Multinucleated cells were pan-T and CD-4 positive. There was no evidence of opportunistic viral or bacterial agents in GI or lymphoid tissues by light or electron microscopy.

### b. SIVpbj Seed Titration In Cynomolgus Macaques.

A virus seed of SIVpbj has been developed for future drug studies using human peripheral blood lymphocytes and a PBj isolate from macaque Peyer's patch tissue. This seed contains  $10^3$  TCID and when undiluted it was shown to be lethal to six cynomolgus macaque, with death occurring within 9 days. Dilution of this seed by 1:10 caused only 1 of 3 cynomolgus macaques to die acutely (Table 22). A 1:100 dilution when given to 3 additional cynos caused no deaths. All of these monkeys became acutely ill.

Table 22

Effect of Dilution of HPBL Derived Seed in Cynomolgus Macaques

Dilution	Disease	Death
Undilute*	6/6	6/6
1:10	3/3	1/3
1:1000	3/3	0/3

\* Titer 4.0 Log<sub>10</sub>

c. Development Of An Infectivity Assay For Drug Screening Using The AA-2 Cell Line.

In an attempt to find cell line susceptible to SIV infection suitable for the rapid screening of infectious sample and for potential drugs, we tested a number of cell line shown to be susceptible to HIV-1 infection. We have tested a number of cell lines that replicate HIV-1 well, such as Cem-SS, H9, Hut-78, Molt-3, Molt-4, Sup-T1, MT-2, and THP-1 for their ability to replicate SIV (Table 23). We identified an Epstein-Barr virus (EBV) positive B lymphoblastoid cell line, containing high levels of the CD4 glycoprotein, that can be infected easily by SIV's and HIV-1. This cell line, called AA-2, when infected with SIV, readily formed large syncytia and produced detectable gag antigen and reverse transcriptase within 2 to 3 days after infection. The peak virus production occurred between 6 and 15 days after infection. Various SIV's, including smm, mne, and agm, replicated to higher titer in the AA-2 cells than did HIV-1.

**Table 23**

**Cell Lines Tested for Virus Growth and Syncytia Formation After Direct Infection with SIV/Mne, SIV/Cat, SIV/Cae or SIV/sm/pbj.**

<u>Cell Line</u>	<u>SIV/Mne (macaque)</u>	<u>SIV/Cat (mangabey) (wild caught)</u>	<u>SIV/sm/pbj (mangabey)</u>	<u>SIV(Cae) (agm)</u>	<u>HIV-1</u>
CEM-SS	-	-	-	+/-	+ / + + <sup>②</sup>
MOLT-4	+	-	-	-	+/-
MOLT-3	-	-	-	-	+/-
SupT1	+-	+-	+-	-	+ / +
THP-1	-	-	-	-	+ / +
CEM-174	+-	+-	+-	nd	+ / + +
MT-2	+/-	+/-	nd	nd	+/-
Hut-78	+/-	+/-	+/-	-	+/-
AA-2	+ / + +	+ / + +	+ / +	+ +	+ / +

② Virus growth/Syncytia formation

nd = not determined

SIV's can be isolated more reliably from the peripheral blood lymphocytes (PBL) of infected macaques after cocultivation with the AA-2 cell line than with Hut-78 or gradient-purified human PBL (Table 24). In addition, cocultures with AA-2 cell and infected macaque PBL replicated to high titer, allowing for easier measurement of positive cultures. Virus-positive cultures can also be expanded and carried for extended periods of time (3 - 5 months) without the addition of fresh uninfected cells to the culture.

Table 24

Direct Comparison of Virus Isolation from SIV/sm/pbj-Infected Rhesus PBL by Cocultivation with Human PBL and AA-2 Cells

<u>Indicator Cells</u>	<u>No. Positive Cultures</u>
Human PBL	20
AA-2	40
Total Tested	40

PBL were isolated by ficoll density gradient separation from SIV/sm/pbj inoculated rhesus, stimulated for 24 hr with PHA-P and added to either PHA-P stimulated human PBL or AA-2 cells in medium containing Interleukin-2 and polybrene. Virus-infected cultures were tested for the presence of core protein using the Coulter HIV-1 p24 ELISA kit on Day 28 of cultivation.

A rapid microuter syncytial cell reduction assay was developed with the AA-2 cell line to measure SIV neutralizing antibody in macaque plasma (Table 25). Reproducible neutralization titers can be obtained within 5 - 7 days. In a collaborative study with Dr. Raoul Benveniste we have recloned the AA-2 cell line and have isolated several new line that have a greater sensitivity to SIV infection than the parental line.

Table 25

Neutralization Titers of Macaque Plasma  
After Inoculation with SIV/Mne

Animal <i>M. mulatta</i>	Date of Death (wks.)	Plasma (weeks)	Titers	
			AA-2 Assay <sup>a</sup>	RT Assay <sup>b</sup>
A85033	66	18	<1:12	ND
		36	<1:12	1:50
		66	<1:12	ND
A85034	87	18	1:96	1:200
		36	1:24	1:50
		78	1:12	<1:50
A85037	96	18	<1:12	ND
		36	<1:12	1:50
		78	<1:12	<1:50
<i>M. nemestrina</i>				
T85056*	15	3	<1:12	<1:50
		14	<1:12	<1:50
F85062	80	18	1:768	>1:800
		35	1:384	1:800
		80	1:12	<1:50
M85026	120	18	1:48	ND
		36	1:12	1:50
		105	<1:12	ND

<sup>a</sup> Assay was set up in a 96-well plate which had been pretreated with poly-L-lysine (10 $\mu$ g/well). A total of 12,500 AA-2 cells in log phase was added to each well. Heat-inactivated plasma was serially diluted and incubated with virus dilutions for 2 hours at room temperature before adding to the AA-2 cells. The virus and antisera were removed after one hour and replaced with fresh media. Wells were scored for syncytia at 5-7 days.

<sup>b</sup> Serially-diluted heat-inactivated plasma was incubated with virus dilutions overnight at 5° C and then added to human PBL cells ( $8 \times 10^6$ ) for 3 hours at 37° C. The cells were then washed twice and resuspended at  $0.5 \times 10^6$ /ml. The cultures were held for 14-21 days and the supernatants were tested for the presence of RT activity. Neutralization titers represent the highest dilution of plasma resulting in no detectable RT activity.

\* Seronegative

d. Elevated Levels Of Circulating Interleukin-6 Associated With Infection Acutely Fatal Simian Immunodeficiency Virus Isolate (SIVsm/pbj)

Interleukin-6 (IL-6) is an important mediator of inflammatory responses, usually associated with acute infections and tissue damage. IL-6 is released by numerous cell types and one of its roles is induction of acute-phase reactants in the liver. We measured the levels of the cytokines IL-1 $\alpha$ , IL-6 and TNF $\alpha$  in serum samples and IL-6 and IL-1 $\beta$  in tissue samples of macaques experimentally infected with SIVsm/pbj, an acutely lethal SIV strain that causes death within 2 weeks of inoculation. No significant increase in circulating levels of IL-1 $\alpha$  or TNF $\alpha$  were observed. The highest levels of circulating IL-6 were observed in pigtailed macaques dying acutely (> 10,000 units/ml), a 1000 fold increase over normal. Cynomolgus macaques dying acutely developed between 100 to 10000 fold increases of IL-6 (1000 to 100000 units/ml) and rhesus macaques had between 10 to 100 fold increases (100 to 1000 units/ml). Rhesus that survived the acute disease associated with SIVsm/pbj had an initial rise of circulating IL-6 (> 100 units/ml) that returned to near-normal levels by 10 to 15 days post challenge. Elevated levels of IL-6 message RNA were observed in spleen and mesenteric lymph nodes and intestine of animals dying acutely. High levels of IL-1 $\beta$  and IL-6 were observed in tissue samples collected from one pigtailed macaque. The high levels correlated with virus isolation from the tissues (Table 26). Levels of IL-6 correlate directly with virus load as determined by virus isolation from the tissues and serum p27 and were associated with elevated levels of acute-phase reactants and immunoglobulin production (Table 27). *In Situ* hybridization of mRNA for IL-6 was developed and results indicate that multiple cell type are involved in IL-6 production including lymphocytes, macrophage and fibroblasts.

**Table 26**  
Cytokine and Virus Load in Selected Tissues from a Pigtailed Macaque Infected with SIVsm/pbj

Tissue	IL-1 $\beta$ (ng/gram)	Virus (log <sub>10</sub> )	IL-6 (units/gram)
Heart	< 100	-	10
Skin	< 100	-	320
Liver	1830	-	19200
Thymus	2660	2	10
Kidney	< 100	-	41600
Pancreas	< 100	-	10
Lung	< 100	-	2880
Salivary Gland	< 100	-	1600
Spleen	10420	4	81200
Mesenteric LN	7610	3	36410
Inguinal LN	3550	2	3200
Esophagus	< 100	-	2400
Stomach	1070	-	14080
Duodenum	11680	5	57600
Jejunum	17290	2	10240
Ileum	19090	ND	5600
Ileal-cecal valve	21160	3	76800
Cecum	7660	3	12800
Colon	9660	3	58880
Serum	ND	3	11625

ND = Not determined

Tissues were collected at postmortem of the animal following exsanguination and perfusion with normal saline. All tissues were snap frozen and stored at -70°C until use. A 10% homogenate was prepared in normal saline, the samples were filtered and run in the assays mentioned above. IL-1 $\beta$  was quantitated using the Cistron IL-1 $\beta$  ELISA kit. Virus isolation was determined using the AA2 cell line and the Coulter HIV p24 ELISA. IL-6 levels were determined using the B9 bioassay.

Table 27

Effect of SIVphj on Levels on Acute Phase Reactants in Macaques

Species	Increase		No change		Decrease	
	10-100-fold	2-10-fold				
Rhesus	IgM	IgA	$\alpha_2$ -Macroglobulin		IgG	
	C4 complement	C3 complement	Transferin			
		Haptoglobin				
Cynomolgus	IgM	IgA	$\alpha_2$ -Macroglobulin	IgG		
		C3 complement	Transferin			
		C4 complement				
		Haptoglobin				
Pigtailed	IgM	IgA	$\alpha_2$ -Macroglobulin		IgG	
	C4 complement	C3 complement	Transferin			
		Haptoglobin				
		$\alpha_2$ -Microglobulin				

e. Inhibition Of SIVpbj Growth *In Vitro* By Protease Inhibitors

Five protease inhibitors (supplied by Smith Kline Beecham) were tested for their ability to inhibit SIVpbj syncytial cell formation (Table 28) and p27 production in the AA-2 cell line. The protease inhibitors were designed to act against the HIV-1 protease, and these studies were performed to determine their effect on SIV. The assay consisted of AA-2 cells incubated with three dilutions of SIVpbj and serial dilutions of the protease inhibitors. The results shown in Table 28 indicate that 2 of the five compounds were active against SIV *in vitro*. Compounds 4 and 5 were able to inhibit up to 2 logs of virus. Further studies were planned to determine the effect of these compounds on virus production in persistently infected cultures and their effect on other SIV isolates. Additional studies, in collaboration with Smith Kline Beecham, will determine the effect of these compounds on virus replication and viral protein processing.

**Table 28**

**Inhibition of SIVpbj Syncytial Cell Formation with Five Protease Inhibitors**

Drug No.	Virus Dilution	Drug Dilution ( $\mu$ M)					
		20	10	5	2.5	1.2	0.7
1	$10^{-2}$	+	+	+	+	+	+
	$10^{-3}$	+	+	+	+	+	+
	$10^{-4}$	+	+	+	+	+	+
2	$10^{-2}$	+	+	+	+	+	+
	$10^{-3}$	+	+	+	+	+	+
	$10^{-4}$	-	-	+	+	+	+
3	$10^{-2}$	+	+	+	+	+	+
	$10^{-3}$	+	+	+	+	+	+
	$10^{-4}$	+	+	+	+	+	+
4	$10^{-2}$	+	+	+	+	+	+
	$10^{-3}$	-	-	+	+	+	+
	$10^{-4}$	-	-	-	-	-	-
5	$10^{-2}$	+	+	+	+	+	+
	$10^{-3}$	-	-	+	+	+	+
	$10^{-4}$	-	-	-	-	-	+

+ = Syncytial cells observed in well

f. Immunohistochemical Demonstration Of SIVsm/PBj Specific Proteins In Fixed Tissues Using SIVmne Specific Antisera.

An immunohistochemical technique was developed for the staining of SIV specific proteins in tissue sections using antisera to SIVmne whole virus and specific proteins. The antisera was specifically to the whole virus, gp120, gp32c, p28, p16 and p14 of SIVmne/E11S biologic clone. Using SIVsm/PBj infected tissues as the target for these antibodies, and an ABC immunoperoxidase staining method, we were able to visualize SIV infected cells within numerous tissue type collected from SIVsm/PBj infected macaques. The maximum number of SIV-antigen positive cells per high powered field in the tissues with greater than  $10^5$  log<sub>10</sub> TCID of virus ranged between 40 - 60. Lymphocytes, macrophage and numerous syncytial cells were observed as antigen positive. Staining patterns include (1) a light to intense diffuse precipitate with distinct nuclear staining; (2) intracytoplasmic focal granular precipitate, and (3) plasma membrane granular precipitate. The antibodies to gp120 and gp32 detected approximately half the cell observed when using antibody to whole virus and they were observed to produce a diffuse precipitate. Syncytial cells were more frequently noted than lymphocytes, and they stained more intensely with anti-gp32. The antibody to the gag proteins detected approximately 2/3 of the maximum number of positive cells, producing a focal or plasma membrane granular pattern. Antibody to the p14 or X-ORF (sid) protein, which has been shown to bind to nucleic acids, produced a staining pattern similar to that observed with antibodies to whole virus, including intense staining of nuclei, and detected similar numbers of positive cells. A cocktail of antisera to all the purified viral proteins generated a pattern identical to the whole virus antisera and similar to the p14 antisera alone. A cocktail excluding p14 antisera identified approximately half of the cells detected by whole virus antisera and no nuclear staining was observed.

g. Ultrastructural Pathology Of SIVsm PBj In Macaques.

Electron microscope analysis of lymphatic and gastrointestinal tissues collected from macaques that died from acute PBj infections demonstrated retroviral replication typical of lentiviruses in numerous lymphoblasts, macrophage and syncytial cells consistent with the above mentioned immunohistochemical results. Viral replication was not observed in parenchymal cells. Mature enveloped virions measured approximately 100nm in diameter, and contained an electron dense truncated conical core and lateral body. The nucleoid remained uncondensed in immature and/or defective particles. The morphology of the cells undergoing viral replication was distinctive. Lymphoblasts were characterized as round to oval cells containing round or slightly indented nuclei with marginated chromatin, and averaged 7 um in diameter. Their plasma membranes were only slightly irregular and the cytoplasm contained numerous free ribosomes with few mitochondria, lysosomes, and profiles of rough endoplasmic reticulum (RER). Macrophage, in contrast, averaged 10 um in diameter, had prominently indented nuclei, and displayed numerous microvilli and pseudopodia along the plasma membrane. Their nucleus/cytoplasm ratios were lower than in the lymphoblasts. The cytoplasm in macrophages contained many ribosomes, profiles of RER, a prominent Golgi apparatus, lysosomes, vesicles, residual bodies, and a prominent number of peripheral pseudo-intracellular vesicles containing budding virions. Syncytial cells morphologically were either of macrophage or lymphocyte origin with characteristics as described above. Lymphocyte syncytia, however, were smaller than the macrophage syncytia, averaging 15 um versus 27 um. Tubuloreticular arrays (viral-like particles) were observed in the RER of the lymphocytes and macrophages irrespective of viral replication.

Degenerative changes were observed in epithelial cells located along the villus tips in intestinal tissues. These included a marked loss of microvilli, cytoplasmic vacuolization, dilation of RER, loss of ground substance, and separation from the basal lamina. Evidence of ulceration was rare and remaining enterocytes maintained integrity over the lamina propria, appearing cuboidal and occasionally squamous. Crypt changes consisted of loss of microvilli, focal necrosis, separation of cells, invasion of lymphocytes and macrophages, and eventual loss of crypt organization. Occasional crypts contained infected lymphocytes surrounded by macrophages. Crypt lumina often contained sloughed epithelium and neutrophils. Epithelial changes were similar to those previously described with mild ischemia, and may be due to the extensive cellular infiltrate and inflammation noted in the lamina propria.

b. Phenotypic And Functional Alterations In Macaque Organs Following SIV Infection.

Analysis of peripheral lymphoid organs from PBj infected rhesus and cynomolgus macaques indicates that despite the absence of circulating lymphocytes, activated lymphocytes can be observed in the lymph nodes, but not in the spleen. To further study this observation, we used a new monoclonal antibody to the CD45 marker found on lymphocytes. This monoclonal was found to stain three populations of T cells which we designate as low, medium and high expressors. The low population was determined to be antigen naive resting cells. The medium peak was determined to be memory cells which express activation markers CD44, CD11a (LFA-1) and CD54 (ICAM-1). The high peak contained a population of T cells which is partially activated, containing cells that also express high levels of CD29, CD11a, CD44 and CD69. Using cell sorting technology, we determined that the CD45 high cell population, unlike the medium and low populations, were unresponsive to PHA stimulation but reacted to IL-2, indicating the presence of high affinity IL-2 receptors. Using this monoclonal antibody we determined that most normal rhesus peripheral blood samples contain all three peaks, while many cynos and pigtailed are deficient in both the low and medium peaks. Macaques infected with STV (STVsm/PBj, SIVcat or SIVmne/E11S) lose the low and medium peaks when a viremia is detected. Animals that later become virus negative can regain these peaks.

#### **E. Special Projects**

Serum samples from murine leukemia virus experiments conducted in Dr. James Rankin's laboratory at USAMRIID were sent to SRI for assay in the UV-XC plaque assay and the RT assay. The first shipment of serum samples, received on April 26, 1988, contained 48 samples to be assayed for the presence of Rauscher MuLV and 15 samples to be assayed for the presence of LP-BMS MuLV. The second shipment of samples, received on August 9, 1988, contained 59 serum samples to be assayed for the presence of Rauscher MuLV.

The results of serum samples assayed for the presence of Rauscher MuLV are reported in Tables 29 and 31. The results of the samples assayed for the presence of LP-BMS MuLV in the UV-XC plaque assay are reported in Table 30.

**Table 29**  
**Assay for Rauscher MuLV**  
**in Serum by UV-XC Plaque and RT Assays**  
**(Samples Received 4-26-88)**

<u>Sample No.</u>	<u>UV-XC Plaque Assay (PFU/ml)</u>	<u>RT Activity (Units)</u>	<u>CV (%)</u>
1	$2.4 \times 10^3$	59,600	35
2	$6.0 \times 10^2$	28,400	10
3	$< 1.0 \times 10^2$	18,000	15
Average		35,333	50
4	$< 1.0 \times 10^1$	5,200	12
5	$< 1.0 \times 10^1$	1,600	43
6	$< 1.0 \times 10^1$	13,200	12
Average		6,667	73
7	$< 1.0 \times 10^1$	800	7
8	$< 1.0 \times 10^1$	800	18
9	$< 1.0 \times 10^1$	800	32
Average		800	0
10	$< 1.0 \times 10^1$	400	28
11	$6.5 \times 10^4$	27,200	15
12	$< 1.0 \times 10^1$	800	43
Average		9,467	132
13	$< 1.0 \times 10^1$	800	83
14	$2.0 \times 10^5$	157,600	5
15	$5.9 \times 10^3$	9,200	17
Average		55,867	129
16	$1.3 \times 10^4$	20,800	27
17	$1.3 \times 10^4$	31,600	9
18	$5.3 \times 10^4$	31,600	2
Average		28,000	18
19	$3.9 \times 10^5$	395,600	23
20	$7.4 \times 10^3$	23,400	13
21	$9.8 \times 10^4$	219,600	6
Average		212,933	71
22	$< 1.0 \times 10^1$	1,600	35
23	$< 1.0 \times 10^1$	1,200	20
24	$< 1.0 \times 10^1$	1,200	21
Average		1,333	14
25	$2.6 \times 10^2$	4,400	13
26	$5.2 \times 10^2$	2,800	5
27	$1.5 \times 10^4$	58,800	5
Average		22,000	118

Table 29 (Cont'd)

<u>Sample No.</u>	<u>UV-XC Plaque Assay (PFU/ml)</u>	<u>RT Activity (Units)</u>	<u>CV (%)</u>
28	$7.5 \times 10^2$	6,000	16
29	$5.0 \times 10^1$	3,200	12
30	$5.6 \times 10^2$	5,600	14
Average		4,933	25
31	$1.2 \times 10^5$	264,400	10
32	$1.7 \times 10^5$	222,800	25
33	$4.3 \times 10^6$	704,400	8
Average		397,200	55
34	$< 2.0 \times 10^1$	32,400	53
35	$< 1.0 \times 10^1$	4,800	55
36	$6.6 \times 10^3$	17,200	12
Average		18,133	62
37	$4.0 \times 10^1$	400	45
38	$4.0 \times 10^2$	3,200	14
39	$1.2 \times 10^2$	800	9
Average		1,467	84
40	$3.9 \times 10^3$	50,400	12
41	$7.6 \times 10^2$	4,800	19
42	$8.9 \times 10^4$	154,400	19
Average		69,867	90
43	$< 2.0 \times 10^1$	1,600	62
44	$< 2.0 \times 10^1$	400	38
45	$< 2.0 \times 10^1$	800	82
Average		933	53
46	$1.0 \times 10^1$	400	30
47	$2.0 \times 10^1$	400	12
48	$2.0 \times 10^1$	1,200	81
Average		667	57

Table 30  
Assay for LP-BM5 Murine Leukemia Virus  
in the UV-XC Plaque Assay  
(Samples Received 4/26/88)

<u>Sample Number</u>	<u>UV-XC Plaque Assay (PFU/ml)</u>
49	<2.0 x 10 <sup>1</sup>
50	<2.0 x 10 <sup>1</sup>
51	<2.0 x 10 <sup>1</sup>
52	<2.0 x 10 <sup>1</sup>
53	<1.0 x 10 <sup>1</sup>
54	<1.0 x 10 <sup>1</sup>
55	<2.0 x 10 <sup>1</sup>
56	<1.0 x 10 <sup>1</sup>
57	<2.0 x 10 <sup>1</sup>
58	<1.0 x 10 <sup>1</sup>
59	<1.0 x 10 <sup>2</sup>
60	<1.0 x 10 <sup>1</sup>
61	<1.0 x 10 <sup>1</sup>
62	<1.0 x 10 <sup>1</sup>
63	<2.0 x 10 <sup>1</sup>

**Table 31**  
**Assay for Rauscher MuLV**  
**in Serum by the UV-XC Plaque and RT Assays**  
**(Samples Received 8-9-88)**

Sample No.	UV-XC Plaque Assay (PFU/ml)	RT Activity (Units)	CV (%)
1	$5.7 \times 10^3$	720	20
2	$1.5 \times 10^4$	640	12
3	$< 2.0 \times 10^1$	400	31
4	$3.2 \times 10^5$	17,840	23
5	$< 2.0 \times 10^1$	320	16
6	$1.0 \times 10^5$	6,960	6
7	$1.0 \times 10^2$	280	52
8	$< 2.0 \times 10^1$	240	11
9	$9.0 \times 10^4$	3,200	13
10	$2.0 \times 10^4$	9,040	34
11	$4.0 \times 10^5$	24,680	23
12	$7.2 \times 10^2$	440	24
13	$< 2.0 \times 10^1$	280	3
14	$3.6 \times 10^2$	320	16
15	$3.8 \times 10^2$	280	24
16	$6.8 \times 10^3$	2,880	40
17	$2.2 \times 10^4$	960	32
18	No sample submitted	-	-
19	$1.0 \times 10^2$	280	9
20	$4.8 \times 10^3$	1,080	21
21	$8.1 \times 10^4$	1,600	46
22	$3.9 \times 10^5$	7,320	0
23	$3.6 \times 10^5$	10,800	7
24	$1.6 \times 10^5$	10,040	31
25	$1.7 \times 10^5$	5,520	9
26	$1.4 \times 10^5$	2,120	1
27	$1.3 \times 10^5$	2,400	10
28	$1.2 \times 10^6$	48,800	37
29	$< 2.0 \times 10^1$	120	25
30	$1.1 \times 10^6$	27,000	7
31	$2.4 \times 10^3$	1,120	23
32	$< 2.0 \times 10^1$	240	30
33	$5.4 \times 10^2$	240	29
34	$3.3 \times 10^5$	3,680	14
35	$3.5 \times 10^5$	4,560	5
36	$6.5 \times 10^5$	18,120	8
37	$2.6 \times 10^5$	14,480	2
38	$< 2.0 \times 10^1$	560	65
39	$2.9 \times 10^3$	960	31
40	$6.2 \times 10^5$	84,120	17

Table 31 (Cont'd)

<u>Sample No.</u>	<u>UV-XC Plaque Assay (PFU/ml)</u>	<u>RT Activity (Units)</u>	<u>CV (%)</u>
41	$3.4 \times 10^5$	21,840	11
42	$<2.0 \times 10^1$	480	4
43	$1.8 \times 10^3$	1,480	9
44	$7.6 \times 10^2$	1,260	6
45	$7.2 \times 10^2$	920	5
46	$7.1 \times 10^3$	1,440	7
47	$1.7 \times 10^5$	6,360	17
48	$5.0 \times 10^2$	680	13
49	$2.2 \times 10^3$	1,840	5
50	$1.8 \times 10^2$	440	11
51	$3.3 \times 10^3$	1,360	25
52	$<2.0 \times 10^1$	280	26
53	$3.6 \times 10^3$	1,160	10
54	$5.2 \times 10^3$	1,040	16
55	$7.2 \times 10^4$	1,560	10
56	$2.2 \times 10^5$	6,720	13
57	$7.0 \times 10^4$	6,040	23
58	$7.4 \times 10^5$	34,840	33
59	$5.8 \times 10^5$	14,240	22
60	$1.0 \times 10^5$	5,840	12

## F. Conclusions

### Primary Screening

Primary screening to assay unknown compounds for anti-HIV activity in tissue culture is well controlled and standardized to provide optimum reproducibility. We have screened about 4500 compounds during this contract period utilizing MT-2 and/or CEM cell lines.

Approximately 7-8 percent of the test compounds have demonstrated some activity as inhibitors of HIV-1. A total of 214 compounds were found active in two or more tests in the primary *in vitro* screen (see Appendix C). As illustrated in (Table 5), 116 compounds (2.5%) produced good anti-HIV activity with selectivity indices of  $\geq 10$ . Further evaluation of these compounds would certainly provide significant leads in the development of anti-HIV drugs.

Several compounds received further studies during the period of performance of this contract. AVS 7891 and AVS 8520, derivatives of TIBO, were shown to have significant activity in cell culture against HIV-1, but not HIV-2, confirming and expanding the work of Pauwels *et al.*, (1990). In addition, a series of compounds designated AM 242, AM 612, and AM 669 have received attention due to their high level activity against HIV-1. Both sets of compounds have been the subject of poster presentations and the TIBO data has been published in *Antiviral Research*.

Of the compounds tested in the synthetic homopolymer template assay, only AVS 5025 is a candidate for inhibition of HIV-1 replication via inhibition of reverse transcriptase. Any other antiviral compound would have to be metabolized to be a candidate for this mechanism of action. This conclusion may be limited by the artificial nature of the assay. Several compounds were found to be active against HIV-1 reverse transcriptase when the ribosomal RNA was used as the template. Five compounds are more active than AZT-TP ( $ID_{50}$  of 0.18  $\mu\text{g}/\text{ml}$ ) in this assay. Suramin, a non-deoxynucleotide reverse transcriptase inhibitor, has an  $ID_{50}$  of 17  $\mu\text{g}/\text{ml}$ . Six additional compounds would fall in the activity range between AZT-TP and suramin. Nine of these eleven compounds showed antiviral activity in the cell culture assays. One of the inactives, AVS 9465, was toxic to the cells at all concentrations tested. Since we switched to the ribosomal RNA template in the last year of the project there have been a higher percentage of reverse transcriptase inhibitors as well as a better correlation between reverse transcriptase inhibition and antiviral activity in cell culture. This could be a result of the new template or a change in the type of compounds being submitted for testing.

The reverse transcriptases from AMV, Moloney MuLV, and Rauscher MuLV can not substitute for the enzyme for HIV-1, at least when synthetic homopolymer templates are used in the assays. Data published by ourselves and others on deoxynucleotide analogs supports this conclusion.

Recently, a novel series of non-nucleoside compounds, derivatives of tetrahydro-imidazo[4,5,1-*jk*] [1,4]-benzodiazepin-2(1H)-one and thione (TIBO), have been shown to have potent and selective activity against human immunodeficiency virus type 1 (HIV-1) in cell culture (Pauwels *et al.*, (1990)). We have found two of these analogs to be potent inhibitors of HIV-1 reverse transcriptase, when ribosomal RNA is used as the template for the assay. Detailed characterization of the kinetic data indicates that this class of compounds may act at a unique, previously unknown, site on the enzyme.

Two *in vivo* murine models of retroviral disease have been established and characterized. The RMuLV model serves well as a rapid primary screen, with the BM-5 model as a secondary screen for agents, especially BRM, active against RMuLV *in vivo*. A number of agents, including the established antiviral agents AZT and Ribavirin, have shown activity in these model systems. MVE-2 consistently demonstrated prophylactic, but not therapeutic, activity. Thus, the potential utility of MVE-2 in treating

HIV infection in patients seems limited. Poly [I,C]-LC showed consistent antiviral activity, especially when given therapeutically. Its antiviral activity seems to depend on its ability to augment splenic NK activity. Finally, protease inhibitors provided consistently strong antiviral activity *in vitro*, and they offer a new therapeutic target for antiviral action.

The SIV research program was concerned with the development of a functional modeling system in which a 100% lethality occurred in infected macaques. Initially, rhesus macaques were used for this project. After successive *in vivo* passage of SIVpbj in rhesus monkeys, only a 75% lethality could be achieved. This forced us to examine other potential macaque species for their usefulness. We currently use cynomolgus macaques for all SIVpbj drug screening protocols. These monkeys were found to uniformly respond to SIVpbj challenge. Five protease inhibitors (supplied by Smith Kline Beecham) were tested for their ability to inhibit SIVpbj syncytial cell formation and p27 production in the AA-2 cell line. The protease inhibitors were designed to act against the HIV-1 protease, and these studies were performed to determine their effect on SIV. The results shown in Table 28 indicate that two of the five compounds were active against SIV *in vitro*. Compounds 4 and 5 were able to inhibit up to 2 logs of virus.

#### IV. LITERATURE CITED

- Baba, M., Pauwels, R., Balzarini, J., Herdewijn, P., De Clercq, E., and Desmyter, J., (1987). Ribavirin Antagonizes Inhibitory Effects of Pyrimidine 2',3'-Dideoxynucleosides on Replication of Human Immunodeficiency Virus In Vitro. *Antimicrob. Agents Chemother.* 31:1613.
- Baril, E., Mitchener, J., Lee, L., and Baril, B. (1977). Action of pancreatic DNase: Requirements for activation of DNA as a template-primer for DNA polymerase  $\alpha$ . *Nucleic Acids Res.* 4:2641-2653.
- Ehrlich, J., Sloan, B.J., Miller, F.A., and Machamer, H.E. (1965). Searching for antiviral materials from microbial fermentations. *Ann. N.Y. Acad. Sci.* 130:5-16.
- Fischinger, P.J., Blevins, C.S., and Nomura, S. (1974). Simple quantitative assay for both xenotropic murine leukemia and ecotropic feline leukemia viruses. *J. Virol.* 14:177-179.
- Harada, S., Koyanagi, Y., and Yamamoto, N. (1985). Infection of HTLV-III/LAV in HTLV-I-carrying cells MT-2 and MT-4 and application in a plaque assay. *Science* 229:563-566.
- Mosier, D. E., Yenter, R. A., and Morse, H. C., III (1987). Functional T lymphocytes are required for a murine retrovirus-induced immunodeficiency disease (MAIDS). *J. Exp. Med.* 165: 1737-1742.
- Nara, P.O., Hatch, W.C., Dunlap, N.M., Roley, W.G., Arthur, L.D., Gonda, M.A., and Fischinger, P.J., (1988). *Aids Res. Hum. Retroviruses* 3:283-302.
- Parker, W.B. and Chang, Y.-C., (1987). Inhibition of DNA primase by nucleoside triphosphates and their arabinofuranosyl analogs. *Mol. Pharmacol.* 31:146-151.
- Parker, W.B., White, E.L., Shaddix, S.C., Ross, L.J., Buckheit, R.W., Jr., Germany, J.M., Secrist, J.A. III, Vince, R., and Shannon, W.M. (1991). Mechanism of inhibition of human immunodeficiency virus type 1 reverse transcriptase and human DNA polymerase  $\alpha$ ,  $\beta$ , and  $\gamma$  by the 5'-triphosphates of carbovir, 3'-azido-3'-deoxythymidine, 2',3'-dideoxyguanosine, and 3'-deoxythymidine. A novel RNA template for the evaluation of antiretroviral drugs. *J. Biol. Chem.* 266:1754-1762.
- Pauwels, R., Andries, K., Desmyter, J., Schols, D., Kukla, M.J., Breslin, H. J., Raeymaeckers, A., Gelder, J.V., Woestenborghs, R., Heykants, J., Schellekens, K., Janssen, M.A.C., De Clercq, E., and Janssen, P.A.J. (1990). Potent and selective inhibition of HIV-1 replication *in vitro* by a novel series of TIBO derivatives. *Nature* 343:470-474.
- Reed, L.J., and Muench, H.A. (!938). A simple method for estimating fifty percent end-points. *Amer. J. Hyg.* 27:493-497.
- Spira, T.J., Bozeman, L.H., Holman, R.C., Warfield, D.T., Phillips, S.K., and Feorino, P.M. (1987). Micromethod for assaying reverse transcriptase of human T-cell lymphotropic virus type III/lymphadenopathy-associated virus. *J. Clin. Microbiol.* 25:97-99.
- Tada, H., Shiho, O., Kuroshima, K., Koyama, M., and Tsukamoto, K. (1986). Improved colorometric assay for interleukin 2. *J. Immunol. Methods* 93:157-165.

White, E.L., Parker, W.B., Macy, L.J., Shaddix, S.C., McCaleb, G., Secrist, J.A. III, Vince, R., and Shannon, W.M. (1989). Comparison of the effect of carbovir, AZT, and dideoxynucleoside triphosphates on the activity of human immunodeficiency virus reverse transcriptase and selected human polymerases. *Biochem. Biophys. Res. Comm.* 161:393-398.

White, E.L., Shaddix, S.C., Brockman, R.W., and Bennett, L.L., Jr. (1982). Comparison of the actions of 9- $\beta$ -D-arabinofuranosyladenine on target enzymes from mouse tumor cells. *Cancer Res.* 42:2260-2264.

## V. ABSTRACTS AND PUBLICATIONS

### Papers:

Black, P.L., Ussery, M.A., Rankin, J.T., Chirigos, M.A. (1990) Therapeutic efficacy of reverse transcriptase inhibitors in murine retrovirus models. Ann. NY Acad. Sci. 616:486-490.

Chirigos, M.A., Ussery, M.A., Rankin, J.T., Herrmann, D., Bicker, U., and Black, P.L. (1990) Antiviral efficacy of Imexon in the Rauscher murine leukemia virus AIDS model. Immunopharm. Immunotox. 12:1-21.

Rosenberg, Y.R., White, B.D., P-permaster, S.F., Zack, P., Jahrling, P.B., Eddy, G.A., Burke, D.S. and Lewis, M.G. Variation in T lymphocyte activation and susceptibility to SIV/PBj-14 induced acute death in macaques. J. Primatol. (in press)

### Manuscripts submitted for publication or in preparation:

Birx, D.L., Lewis, M.G., Zack, P.M., Vahey, M.A., Redfield, R.R., Burke, D.L., Tosato, G. and Jahrling, P.B. Abnormally elevated serum levels of interleukin-6 in pigtailed macaques infected with SIV/sm/pbj. (submitted)

Black, P.L., Downs, M.B., Lewis, M.G., Ussery, M.A., Dreyer, G.B., Petteway, S.B., and Lambert, D.M. Antiretroviral activity of protease inhibitors in animal models of AIDS. I. Activity against murine leukemia virus and simian immunodeficiency virus in tissue culture. (In preparation)

Black, P.L., Lewis, M.G., Petteway, S.W., Lambert, D., Ussery, M., and Jahrling, P.B. Inhibition of murine leukemia virus and simian immunodeficiency virus with an HIV protease inhibitor. (in preparation)

Brown, C.R., Lewis, M.G., Jahrling, J.B., Elkins, W.R., and Zack, P.M. Ultrastructural pathology of the acutely lethal primate lentivirus, SIVsm-pbj in pigtailed and cynomolgus macaques. (in preparation)

Klinman, D.M., Krieg, A., Conover, J., Ussery, M.A., and Black, P.L. Effect of cyclophosphamide, total body irradiation and zidovudine on retrovirus proliferation and disease progression in murine AIDS. (Submitted)

Lewis, M.G., Birx, D.L., Zack, P.M., Vahey, M.A., Redfield, R.R., Burke, D.L., Tosato, G. and Jahrling, P.B. Species variation of interleukin 6 product on associated with infection of an acutely fatal simian immunodeficiency virus isolate. (in preparation)

Lewis, M.G., Jahrling, P.B., Nara, P.L., Mann, D. and Benveniste, R.E. Utilization of a transformed B-cell line that produces readily detectable syncytia after infection with various SIV isolates. (in preparation)

Lewis, M.G., Zack, P.M., and Jahrling, P.B. Infection of rhesus and cynomolgus macaques with a rapidly fatal SIV isolate from sooty mangabeys (SIVsmm/pbj). (submitted)

White, E.L., Buckheit, R.W., Jr., Ross, L.J., Germany, J.M., Andries, K., Pauwels, R., Janssen, P.A.J., Shannon, W.M., and M.A. Chirigos. A TIBO Derivative, R82913, is a potent inhibitor of HIV-1 reverse transcriptase with heteropolymer templates. (1991) Antiviral Research (in press)

Zack, P.M., Hall, W., Lewis, M.G., Jahrling, P.B., Vogel, A.P. and Elkins, W.R. Immunohistchemical staining of simian immunodeficiency virus PBj infected tissues using SIVmne specific antibodies. (in preparation)

Zack, P.M., Vogel, A.P., Hall, W.C., Lewis, M.G., and Jahrling, P.B. Pathology of SIVsm-pbj in pigtailed macaques. (in preparation)

Abstracts:

Benveniste, B., Heidecker, G., Henderson, L., Powell, P., Lewis, M., Hu, S.L., Morton, W., Eddy, G., Burke D. and Shafferman, A. Pathogenesis and vaccine studies in SIV and Type D retrovirus-infected macaques. Annual Meeting of the Laboratory of Tumor Cell Biology, National Cancer Institute, Bethesda, MD, 1990.

Benveniste, R., Mann, D., Kuller, L., Morton, W., Hu, S.L., Eddy, G., Shafferman, A. and Lewis, M. Virus Neutralizing antibodies in SIV and Type-D vaccinated macaques, and in animals infected with SIV/Mne. Symposium on Nonhuman Primate Models of AIDS, New Orleans, LA, 1990.

Black, P.L., Lewis, M.G., Downs, M.B., Ussery, M.A., Lambert, D.M., Dreyer, G.B., and Petteway, S.R. (1991) Antiviral activity of protease inhibitors in animal models of AIDS. 4<sup>th</sup> International Conference on Antiviral Research, New Orleans, LA, Antiviral Res. Suppl. 1:130.

Black, P.L., Lewis, M.G., Downs, M.B., Ussery, M.A., Lambert, D.M. and Petteway, S.R., Jr. Antiviral activity of protease inhibitors in animal models for AIDS. International Society for Antiviral Research, New Orleans, LA, 1991.

Black, P.L., McKinnon, K.M., Wooden, S.L., and Ussery, M.A. (1991) Antiviral activity of the interferon inducer poly[I,C]-LC in a murine AIDS model: Requirement for augmentation of natural killer (NK) cell activity and synergy with oral AZT. Accepted for presentation at 17<sup>th</sup> International Congress of Chemotherapy, Berlin, Germany.

Black, P.L., Rankin, J.T., Ussery, M.A., and Chirigos, M.A. (1990) Evaluation of interferon inducers and other biological response modifiers in murine AIDS models. UCLA Symposium on Molecular Pathways of Cytokine Action, Park City, UT.

Black, P.L., Rankin, J.T., Ussery, M.A., and Chirigos, M.A. (1989) Murine models for evaluating the therapeutic efficacy of antiviral agents and biological response modifiers in treating retroviral disease. J. Cell. Biochem. Suppl. 13B:297.

Black, P.L., Rankin, J.T., Ussery, M.A., and Chirigos, M.A. (1989) Therapeutic efficacy of antiviral agents and biological response modifiers in murine AIDS models. 7<sup>th</sup> International Congress of Immunology, West Berlin, Germany.

Black, P.L., Ussery, M.A., McKinnon, K.M., Rankin, J.T., Wooden, S.L., and Chirigos, M.A. (1990) Antiviral activity of interferon inducers and other biological response modifiers in Rauscher leukemia virus-infected mice correlates with augmentation of natural killer cell activity. Conference on Advances in Molecular Biology and Targeted Treatments for AIDS, Washington, DC.

Black, P.L., Ussery, M.A., Rankin, J.T., and Chirigos, M.A. (1990) Antiviral activity of biological response modifiers in Rauscher leukemia virus-infected mice correlates with augmentation of natural killer cell activity. 8<sup>th</sup> International Congress of Virology, West Berlin, Germany.

Black, P.L., Ussery, M.A., Rankin, J.T., and Chirigos, M.A. (1990) Antiviral efficacy of the heteropolyanions AVS 2575 and AVS 2576 in murine AIDS models. UCLA Symposium on Animal Models of Human Viral Diseases, Keystone, CO, J. Cell. Biochem. Suppl. 14D:62.

Black, P.L., Ussery, M.A., Rankin, J.T., and Chirigos, M.A. (1989) Therapeutic efficacy of reverse transcriptase inhibitors in murine retrovirus models. 2<sup>nd</sup> International Conference on Drug Research in Immunologic and Infectious Diseases: AIDS, Arlington, VA.

Black, P.L., Wooden, S.L., McKinnon, K.M., and Ussery, M.A. (1991) Comparison of the activities of AZT, ddi and AZT-P-ddI dimer *in vitro* and *in vivo* in a murine AIDS model. Accepted for presentation at 7<sup>th</sup> International Conference on AIDS, Florence, Italy.

Brown, C.R., Lewis, M.G., Jahrling, J.B., Elkins, W.R. and Zack, P.M. Ultrastructural pathology of the acutely lethal primate lentivirus, SIV<sub>smm</sub>-pbj in pigtailed and cynomolgus macaques. Symposium on Nonhuman Primate Models of AIDS, New Orleans, LA, 1990.

Buckheit, R.W., Jr., Brown, R.D., White, E.L., Ross, L.J., Chirigos, M.A., Shannon, W.M., (1991). Significant Anti-HIV Activity of New Modified Polysaccharides *In Vitro*. Symposium of Antitvirals, Vaccines and Immunotherapy of HIV Infection, St. Petersburg Beach, FL.

Chirigos, M.A., Black, P.L., Rankin, J.T., Ussery, M.A., Herrmann, D., and Bicker, U. (1990) Antiviral efficacy of Imexon in the Rauscher murine leukemia virus AIDS model. Conference on Advances in Molecular Biology and Targeted Treatments for AIDS, Washington, DC.

Jahrling, P.B., Lewis, M.G., Zack, P.M., Fultz, P.N., McClure, H.M. and Peters, C.J. Infection of rhesus macaques with a rapidly fatal mangabey SIV isolate (SIVpbj). International meeting on animal models in AIDS, Maastricht, The Netherlands, 1989.

Jahrling, P.B., Lewis, M.G., Zack, P.M., and Peter, C.J. Infection of rhesus and cynomolgus macaques with a rapidly fatal SIV isolate from sooty mangabeys (SIV<sub>smm</sub>/pbj). Symposium on Nonhuman Primate Models of AIDS, Portland, OR, 1989.

Klinman, D.M., Ussery, M.A., Conover, J., Krieg, A., and Black, P.L. (1991) Elimination of infected lymphocytes by cyclophosphamide treatment and irradiation followed by syngeneic bone marrow reconstitution in the presence of AZT: Effect on retrovirus proliferation and disease progression in murine AIDS. Accepted for presentation at 17<sup>th</sup> International Congress of Chemotherapy, Berlin, Germany.

Lewis, M.G., Birx, D.L., Zack, P.M., Vahey, M.A., Redfield, R.R., Burke, D.L. and Jahrling, P.J. Elevated levels of circulating interleukin-6 are associated with infection with an acutely fatal simian immunodeficiency virus isolate. Annual Meeting of the Laboratory of Tumor Cell Biology, National Cancer Institute, Bethesda, MD, 1990.

Lewis, M.G., Birx, D.L., Zack, P.M., Vahey, M.A., Redfield, R.R., Burke, D.L. and Jahrling, P.J. Elevated levels of circulating interleukin-6 are associated with infection with an acutely fatal simian immunodeficiency virus isolate. Conference on Advances in Molecular Biology and Targeted Treatments for AIDS, Washington, D.C. 1990.

Lewis, M.G., Birx, D.L., Zack, P.M., Vahey, M.A., Redfield, R.R., Burke, D.L. and Jahrling, P.J. Elevated levels of circulating interleukin-6 are associated with infection with an acutely fatal simian immunodeficiency virus isolate. UCLA Symposium, Keystone, CO. Cell. Biochem. Supplement 14D, 1990

Lewis, M.G., Birx, D.L., Zack, P.M., Vahey, M.A., Redfield, R.R., Burke, D.L. and Jahrling, P.J. Elevated levels of circulating interleukin-6 are associated with infection with an acutely fatal simian immunodeficiency virus isolate. VIII<sup>th</sup> International Congress of Virology, Berlin, 1990.

Lewis, M.G., Birx, D.L., Zack, P.M., Vahey, M.A., Redfield, R.R., Burke, D.S. and Jahrling, P.B. Species variation of interleukin production associated with infection with an acutely fatal simian immunodeficiency virus isolate (SIVsm:phj). Symposium on Nonhuman Primate Models of AIDS, New Orleans, LA, 1990.

Lewis, M.G., Jahrling, P.B., Peters, C.J., Nara, P.L. and Benveniste, R.E. Utilization of a transformed B-cell line that produces readily detectable syncytia after infection with various SIV isolates. Symposium on Nonhuman Primate Models of AIDS, Portland, OR, 1989.

Lewis, M.G., Jahrling, P.B., and Zack, P.M. Infection of rhesus macaques with a rapidly fatal mangabey SIV isolate (SIVpbj). Conference on Advances in Molecular Biology and Targeted Treatments for AIDS. Washington, D.C. 1990.

Rankin, J.T., Ussery, M.A., Black, P.L., and Chirigos, M.A. (1988) *In vivo* suppression of murine retrovirus replication by selected agents. N.I.H. AIDS National Cooperative Drug Discovery and Development Meeting. Oakland, California.

Rosenberg, Y.R., White, B.D., Lewis, M.G., Mosca, J., Papermaster, S.F., Kersey, K., de Crombrugghe, I., Eddy, G.A. and Burke, D.S. Differences in T cell function in rhesus and pigtailed monkeys: Implications regarding susceptibility to SIV infection. Symposium on Nonhuman Primate Models of AIDS, New Orleans, LA, 1990.

Rosenberg, Y.R., White, B.D., Lewis, M.G., Mosca, J., Papermaster, S.F., Kersey, K., Eddy, G.A. and Burke, D.S. Phenotypic and functional alterations in primate lymphoid organs following SIV and HIV infection. Symposium on Nonhuman Primate Models of AIDS, New Orleans, LA, 1990.

Ussery, M.A., Black, P.L., Downs, M.B., Lewis, M.G., Lambert, D.M., Dreyer, G.B., and Petteway, S.R. (1991) *In vitro* and *in vivo* activity of HIV protease inhibitors in an animal retroviral model. Accepted for presentation at 7<sup>th</sup> International Conference on AIDS, Florence, Italy.

Ussery, M.A., Black, P.L., McKinnon, K.M., Rankin, J.T., Wooden, S.L., and Chirigos, M.A. (1990) Evaluation of dideoxynucleosides in murine retroviral models. Conference on Advances in Molecular Biology and Targeted Treatments for AIDS, Washington, DC.

Ussery, M.A., Black, P.L., Rankin, J.T., and Chirigos, M.A. (1990) Interferon inducers and other biological response modifiers in murine retrovirus models. 3<sup>rd</sup> International Conference on Antiviral Research, Brussels, Belgium, Antiviral Res. Suppl. 1:91.

Ussery, M.A., Black, P.L., Rankin, J.T., and Chirigos, M.A. (1989) *In vivo* efficacy of the immuno-modulator MVE-2 alone and in combination with AZT in the Rauscher murine leukemia retrovirus model. 29<sup>th</sup> Interscience Conference on Antimicrobial Agents and Chemotherapy. Houston, TX

White, E.L. A Novel RNA Template for the Study of Reverse Transcriptase Inhibitors & Its Application to Understanding the Nature of the TIBO Blinding Site. 4th Trilateral Meeting "Anti-HIV Drug Development" Berlin, Germany, 1991.

White, E.L., Buckheit, R.W., Jr., Parker, W.B., Ross, L.J., Germany, J.M., Shannon, W.M., and M.A. Chirigos. (1991) TIBO Derivatives are Potent Inhibitors of HIV-1 Reverse Transcriptase with Heteropolymer Templates. First Symposium on HIV Disease: Pathogenesis and Therapy, Orlando, Florida.

White, E.L., Buckheit, R.W., Jr., Parker, W.B., Ross, L.J., Germany, J.M., Shannon, W.M., Janssen, P.A.J., and M.A. Chirigos. (1991) TIBO Derivatives are Potent Inhibitors of HIV-1 Reverse Transcriptase with Heteropolymer Templates. Fourth International Conference on Antiviral Research, New Orleans, Louisiana.

White, E.L., Parker, W.B., Ross, L.J., Shaddix, S.C., and W.M. Shannon. A Novel RNA Template for the Study of Antiretroviral Drugs. (1991) Fourth International Conference on Antiviral Research, New Orleans, Louisiana.

Wooden, S.L., Ussery, M.A., McKinnon, K.M., Rankin, J.T., Chirigos, M.A., and Black, P.L. (1990) Antiviral efficacy of the heteropolyanions AVS 2575 and AVS 2576 in two murine retrovirus models of AIDS. Conference on Advances in Molecular Biology and Targeted Treatments for AIDS, Washington, DC.

Zack, P.M., Hall, W.C., Benveniste, R.E., Henderson, L.E., Lewis, M.G., Jahrling, P.B. Immunohistochemical demonstration of SIVsmm-pbj specific proteins in fixed tissues using SIVmne specific antisera. Symposium on Nonhuman Primate Models of AIDS, Portland, OR, 1989.

Zack, P.M., Hall, W.C., Vogel, A.P., Elkins, W.R., Brown, C.R., Lewis, M.G. and Jahrling, P.B. Pathology and immunopathology of SIVsmm-pbj associated gastroenteritis in macaques. Symposium on Nonhuman Primate Models of AIDS, Portland, OR, 1989.

Zack, P.M., Vogel, A.P., Hall, W.C., Lewis, M.G., Jahrling, P.B., and Peters, C.J. Pathology of SIVsmm-pbj in rhesus macaques. International meeting on animal models in AIDS, Maastrich, The Netherlands, 1989.

**VI. LIST OF PERSONNEL RECEIVING CONTRACT SUPPORT,  
GRADUATE DEGREES RECEIVED**

Professional

Black, Paul L., Ph.D.  
 Bowdon, Bonnie Jean, B.S.  
 Brando, Lorraine V., Ph.D.  
 Brazier, Anne D., B.S.  
 Buckheit, Robert W., Jr., Ph.D.  
 Duimadge, Elizabeth A., M.S.  
 Herren, Thomas C., B.S.  
 Hollingshead, Melinda G., Ph.D.  
 Kahlon, Jabbir B., Ph.D.  
 Lavelle, George C., Ph.D.  
 Lewis, Mark G., Ph.D.  
 Parker, William B., Ph.D.  
 Peake, Valerie D., B.A.  
 Rose, Lucy M., B.S.  
 Sosadix, Sue C., B.S.  
 Shannon, William M., Ph.D.  
 Siddiqui, Khwaja M., Ph.D.  
 Toyer, Barbara R., B.S.  
 Westbrook, T. Louise, B.S.  
 White, E. Lucille, B.A.  
 Wilkoff, Lee J., Ph.D.  
 Williams, Gary J., Ph.D.

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Bailey, E. Jean, B.S.  
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 Borden, Walter  
 Brown, Richard D., B.S.  
 Conway, Joan A., B.S.  
 Crockett, Jacqueline, B.S.  
 Daniels, Pamela R., B.S.  
 Danner, Al B., B.S.  
 Donety, Kevin W.  
 Edwards, Carrie F.  
 Farms, Lajuana A., A.A.S.  
 Germany, Julie M., B.S.  
 Hultquist, John W., B.S.  
 Johnson, Joan M., B.S.  
 Keith, Kathy A., M.S.  
 Konzelman, James, B.S.  
 Lambert, Byron W., B.S.  
 Langston, Stephen A., B.S.  
 Macy, Lisa J., M.S.  
 Mayomi, Edith E., B.S.  
 McCann, Dorothy M., B.S.  
 McDuffie, Teresa L.  
 McKinnon, Katherine Marie, B.S.  
 Merrill, Steven E., B.S.  
 Moody, Rose G.  
 Morris, Karen L., B.S.  
 Nichols, Jeffrey A., B.S.  
 Niwas, Santosh, Ph.D.  
 Page, Kimberly C., B.S.  
 Parcell, Edward B.  
 Pickett, Sarah A.  
 Potts, Daniel C., B.S.  
 Preasley, Loanne F.  
 Qualls, Karen J., B.S.  
 Roberts, Beverly D., B.S.  
 Ross, Larry J., M.S.  
 Ross, Martha J., M.S.  
 Rosenberry, J. David, B.S.  
 Rowe, Thomas, B.S.  
 Schnupf, Jane E., B.S.  
 Seifeldin, Galaleidis A., M.S.  
 Stringfellow, S. Ellen, B.S.  
 Stringfellow, Thomas D., B.S.  
 Sykes, Wendy J.  
 Talley, Judith B.  
 Tubbs, Robert C., Jr.  
 Tucker, Michael R., B.S.  
 Vance, Frank L., IV  
 Vizzini, Rose Marie, A.S.  
 Vanavanonda, Sudhindra, B.S., M.S.  
 Valley Oguaro, Jacob E., B.S.  
 Waggoner, Kelly E.  
 Watkins, Stephen L., B.S.  
 Woods, Sharon L., B.S.  
 Worsham, Robin D., B.S.  
 Zaborowski, Kathryn E., B.S.

Support  
Service

Bell, Elijah  
 Billingsley, Anna B.  
 Bryant, Marguerite  
 Duke, Jerome C.  
 Duke, Walter D.  
 Gurley, Mark R.  
 Harris, Reginald  
 Hubbard, Melissa D.  
 Leopard, Robert H.  
 Meadows, Billy F.  
 Millwood, M. Durloa  
 Milton, Ruthie W.  
 Parham, Charles F.  
 Smith, Larry  
 Trammell, George, Jr.  
 Williams, Timothy  
 Wright, Kenneth E.

## APPENDICES

## **APPENDIX A**

**Total Experience of *In Vitro* Antiviral  
Screening Results**

**Part I - Summary of AID's Testing for  
Period of 1/1/88 to 12/31/88**

**Part II - Summary of AID's Testing for  
Period of 1/1/89 to 4/30/91**

**APPENDIX A**

**Part I - Summary of AIDS Testing for  
Period of 1/1/88 to 12/31/88**

SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88

COMPOUND	PROTOCOL	VIRUS	VR	ID50	CELL	MT50	TI	DATE
AVS-0001	CPE	HIV	----	----	MT-2	51.40	----	4/14/88
AVS-0001	CPE	HIV	----	----	CEM	70.90	----	4/26/88
AVS-0079	CPE	FELV	1.45	5.00	81C	3.20	0.63	6/3/88
AVS-0079	CPE	HIV	----	----	AT48	0.32	----	2/3/88
AVS-0094	CPE	HIV	----	----	AT48	> 100.00	----	1/27/88
AVS-0094	CPE	HIV	----	----	MT-2	> 100.00	----	5/9/88
AVS-0094	CPE	HIV	----	14.70	MT-2	> 100.00	> 6.82	6/22/88
AVS-0094	CPE	HIV	----	68.50	MT-2	> 100.00	> 1.46	8/16/88
AVS-0111	CPE	HIV	----	----	MT-2	5.81	----	8/16/88
AVS-0136	CPE	HIV	----	4.73	MT-2	34.30	17.80	6/32/88
AVS-0136	CPE	HIV	----	----	MT-2	84.40	----	8/16/88
AVS-0136	CPE	HIV	----	----	MT-2	> 100.00	----	10/5/88
AVS-0140	CPE	HIV	----	5.80	MT-2	> 100.00	> 17.00	6/22/88
AVS-0206	CPE	FELV	3.02	25.20	81C	320.00	12.60	6/3/88
AVS-0206	CPE	HIV	----	----	MT-2	> 100.00	----	4/14/88
AVS-0206	CPE	HIV	----	----	CEM	> 100.00	----	4/26/88
AVS-0206	CPE	HIV	----	----	MT-2	> 10.00	----	5/23/88
AVS-0206	S1	SARV2	----	9.10	RA41	> 320.00	> 35.10	6/6/88
AVS-0215	CPE	FELV	1.60	20.70	81C	32.00	1.54	6/3/88
AVS-0222	CPE	FELV	1.55	47.50	81C	32.00	0.67	6/3/88
AVS-0233	CPE	HIV	----	----	MT-2	46.50	----	5/9/88
AVS-0253	CPE	HIV	----	----	MT-2	< 0.61	----	5/9/88
AVS-0272	CPE	HIV	----	----	MT-2	> 100.00	----	5/9/88
AVS-0286	CPE	HIV	----	----	MT-2	< 0.10	----	5/18/88
AVS-0286	CPE	HIV	----	----	MT-2	< 0.32	----	12/28/88
AVS-0360	CPE	HIV	----	----	AT48	< 0.10	----	3/18/88
AVS-0360	CPE	HIV	----	----	AT48	< 0.10	----	3/23/88
AVS-0360	CPE	HIV	----	----	MT-2	< 0.10	----	3/29/88
AVS-0360	CPE	HIV	----	----	MT-2	< 0.10	----	4/15/88
AVS-0361	CPE	HIV	----	----	AT48	< 0.10	----	3/18/88
AVS-0361	CPE	HIV	----	----	AT48	< 0.10	----	3/23/88
AVS-0580	CPE	HIV	----	58.80	MT-2	> 100.00	> 1.70	4/15/88
AVS-0581	CPE	HIV	----	32.50	MT-2	> 100.00	> 3.08	4/15/88
AVS-0582	CPE	HIV	----	----	MT-2	> 100.00	----	4/15/88
AVS-0583	CPE	HIV	----	----	MT-2	> 100.00	----	4/15/88
AVS-0584	CPE	HIV	----	30.40	MT-2	> 100.00	> 3.29	4/15/88
AVS-0585	CPE	HIV	----	----	MT-2	> 100.00	----	4/15/88
AVS-0586	CPE	HIV	----	----	MT-2	> 100.00	----	4/15/88
AVS-0587	CPE	HIV	----	----	MT-2	> 100.00	----	4/15/88
AVS-0588	CPE	HIV	----	----	MT-2	> 100.00	----	4/15/88
AVS-0595	CPE	HIV	----	0.77	MT-2	> 100.00	> 130.00	3/29/88
AVS-0598	CPE	HIV	----	4.98	MT-2	> 100.00	> 20.00	4/15/88
AVS-0599	CPE	HIV	----	11.40	MT-2	> 100.00	> 8.77	4/15/88
AVS-0600	CPE	HIV	----	19.20	MT-2	> 100.00	> 5.19	4/15/88
AVS-0606	CPE	HIV	----	----	MT-2	7.86	----	1/11/88
AVS-0697	CPE	HIV	----	----	AT48	> 100.00	----	1/11/88
AVS-0697	CPE	HIV	----	14.20	MT-2	> 100.00	> 7.01	4/15/88
AVS-0698	CPE	HIV	----	----	AT48	> 100.00	----	1/11/88
AVS-0698	CPE	HIV	----	15.40	MT-2	> 100.00	> 6.49	4/15/88
AVS-0700	CPE	HIV	----	----	AT-5	1.00	----	1/11/88

**SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/82 TO 12/31/88**

COMPOUND	PROTOCOL	VIRUS	VR	ID50	CELL	NTC50	T1	DATE
AVS-0700	CPE	HIV	----	17.40	MT-2	> 100.00	>	7.66 6/15/88
AVS-0702	CPE	HIV	----	----	ATM8	32.00	----	1/11/88
AVS-0702	CPE	HIV	----	4.09	MT-2	> 100.00	>	24.50 4/13/88
AVS-0704	CPE	HIV	----	----	ATM8	3.20	----	1/11/88
AVS-0704	CPE	HIV	----	----	MT-2	> 100.00	----	4/13/88
AVS-0705	CPE	HIV	----	----	ATM8	32.00	----	1/11/88
AVS-0705	CPE	HIV	----	----	MT-2	> 100.00	----	4/ 6/88
AVS-0706	CPE	HIV	----	----	ATM8	< 32.00	----	5/11/88
AVS-0706	CPE	HIV	----	----	MT-2	91.00	----	4/ 6/88
AVS-0707	CPE	HIV	----	----	ATM8	< 10.00	----	1/11/88
AVS-0707	CPE	HIV	----	----	MT-2	22.40	----	4/ 6/88
AVS-0708	CPE	HIV	0.75	----	ATM8	1.00	----	1/11/88
AVS-0708	CPE	HIV	23.30	----	MT-2	95.60	4.11	4/ 6/88
AVS-0709	CPE	HIV	1.90	----	ATM8	100.00	----	1/11/88
AVS-0709	CPE	HIV	24.50	----	MT-2	> 100.00	>	4.08 4/ 6/88
AVS-0709	CPE	HIV	44.40	----	MT-2	> 100.00	>	2.24 11/ 9/88
AVS-0709	CPE	HIV	----	----	MT-2	> 320.00	----	11/22/88
AVS-0710	CPE	HIV	----	----	ATM8	3.20	----	1/30/88
AVS-0710	CPE	HIV	20.00	----	MT-2	60.30	3.02	4/ 6/88
AVS-0712	CPE	HIV	----	----	ATM8	10.00	----	1/30/88
AVS-0712	CPE	HIV	35.50	----	MT-2	> 100.00	>	2.82 4/ 6/88
AVS-0713	CPE	HIV	----	----	ATM8	3.20	----	1/30/88
AVS-0713	CPE	HIV	----	----	MT-2	25.70	----	4/ 6/88
AVS-0714	CPE	HIV	----	----	ATM8	100.00	----	1/30/88
AVS-0714	CPE	HIV	12.30	----	MT-2	78.80	6.40	4/ 6/88
AVS-0715	CPE	HIV	----	----	MT-2	> 100.00	----	4/ 6/88
AVS-0716	CPE	HIV	0.80	----	ATM8	> 10.00	----	2/ 3/88
AVS-0801	CPE	HIV	----	----	MT-2	< 1.00	----	5/23/88
AVS-0913	CPE	HIV	----	----	MT-2	> 1.00	----	5/31/88
AVS-0999	CPE	PELV	2.44	8.10	81C	100.00	12.20	7/22/88
AVS-0999	CPE	HIV	11.80	----	MT-2	> 100.00	>	8.47 4/14/88
AVS-0999	CPE	HIV	----	----	CED	> 100.00	----	4/26/88
AVS-0999	CPE	HIV	----	----	MT-2	> 100.00	----	5/25/88
AVS-1116	CPE	HIV	----	----	MT-2	> 100.00	----	11/22/88
AVS-1117	CPE	HIV	----	----	MT-2	> 100.00	----	11/22/88
AVS-1207	CPE	HIV	----	----	MT-2	> 100.00	----	6/10/88
AVS-1307	CPE	HIV	----	----	MT-2	> 100.00	----	5/31/88
AVS-1308	CPE	HIV	----	----	MT-2	> 100.00	----	6/ 1/88
AVS-1312	CPE	HIV	----	----	MT-2	> 100.00	----	5/31/88
AVS-1315	CPE	HIV	----	----	MT-2	> 100.00	----	5/31/88
AVS-1337	CPE	HIV	0.55	----	MT-2	24.20	43.50	5/31/88
AVS-1371	CPE	HIV	----	----	MT-2	> 100.00	----	11/22/88
AVS-1372	CPE	HIV	----	----	MT-2	51.60	----	11/22/88
AVS-1381	CPE	HIV	----	----	MT-2	59.80	----	12/ 9/88
AVS-1392	CPE	HIV	----	----	MT-2	> 100.00	----	5/31/88
AVS-1403	CPE	HIV	3.95	< 0.10	ATM8	10.00	> 100.00	1/11/88
AVS-1603	CPE	HIV	3.85	< 0.10	ATM8	10.00	> 100.00	1/11/88
AVS-1603	CPE	HIV	4.50	< 0.10	ATM8	32.00	> 320.00	1/11/88
AVS-1603	CPE	HIV	3.75	< 0.10	ATM8	10.00	> 100.00	1/11/88
AVS-1603	CPE	HIV	4.45	< 0.10	ATM8	32.00	> 320.00	1/11/88

SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88

COMPOUND	PROTOCOL	VIRUS	VR	10 <sup>50</sup>	CELL	NTC50	TI	DATE
AVS-1603	CPE	HIV	1.25	----	ATM8	3.20	----	1/21/88
AVS-1603	CPE	HIV	4.85	< 0.10	ATM8	32.00	> 320.00	1/27/88
AVS-1603	CPE	HIV	6.15	< 0.10	ATM8	32.00	> 320.00	1/30/88
AVS-1603	CPE	HIV	3.90	< 0.10	ATM8	10.00	> 100.00	2/ 3/88
AVS-1603	CPE	HIV	5.25	< 0.10	ATM8	10.00	> 100.00	2/ 3/88
AVS-1603	CPE	HIV	1.50	0.32	ATM8	3.20	10.00	2/ 4/88
AVS-1603	CPE	HIV	7.05	< 0.10	ATM8	100.00	> 1000.00	2/10/88
AVS-1603	CPE	HIV	6.00	< 0.10	ATM8	32.00	> 320.00	2/15/88
AVS-1603	CPE	HIV	3.80	< 0.10	ATM8	10.00	> 100.00	2/17/88
AVS-1603	CPE	HIV	4.65	< 0.10	ATM8	3.20	> 32.00	3/18/88
AVS-1603	CPE	HIV	5.55	< 0.10	ATM8	10.00	> 100.00	3/23/88
AVS-1603	CPE	HIV	----	< 0.10	MT-2	62.50	> 625.00	3/29/88
AVS-1603	CPE	HIV	----	< 0.10	MT-2	48.90	> 489.00	3/29/88
AVS-1603	CPE	HIV	----	< 0.10	MT-2	86.40	> 864.00	4/ 1/88
AVS-1603	CPE	HIV	----	< 0.10	MT-2	54.00	> 540.00	4/ 4/88
AVS-1603	CPE	HIV	----	< 0.10	MT-2	54.60	> 546.00	4/ 4/88
AVS-1603	CPE	HIV	----	< 0.10	MT-2	56.00	> 560.00	4/ 8/88
AVS-1603	CPE	HIV	----	< 0.10	MT-2	66.90	> 669.00	4/15/88
AVS-1603	CPE	HIV	----	< 0.10	MT-2	66.50	> 668.00	4/15/88
AVS-1603	CPE	HIV	----	< 0.10	MT-2	> 100.00	> 1000.00	4/16/88
AVS-1603	CPE	HIV	----	< 0.10	MT-2	> 100.00	> 1000.00	4/16/88
AVS-1603	CPE	HIV	----	< 0.10	MT-2	> 100.00	> 1000.00	4/29/88
AVS-1603	CPE	HIV	----	< 0.10	MT-2	> 100.00	> 1000.00	5/ 3/88
AVS-1603	CPE	HIV	----	< 0.10	MT-2	91.60	> 916.00	5/ 9/88
AVS-1603	CPE	HIV	----	0.19	MT-2	> 100.00	> 521.00	5/18/88
AVS-1603	CPE	HIV	----	0.01	MT-2	> 10.00	> 642.00	5/23/88
AVS-1603	CPE	HIV	----	< 0.10	MT-2	> 100.00	> 1000.00	5/26/88
AVS-1603	CPE	HIV	----	2.25	MT-2	> 100.00	> 44.50	5/31/88
AVS-1603	CPE	HIV	----	< 0.10	MT-2	> 100.00	> 1000.00	5/31/88
AVS-1603	CPE	HIV	----	0.18	MT-2	> 100.00	> 556.00	6/ 1/88
AVS-1603	CPE	HIV	----	0.64	MT-2	> 100.00	> 226.00	6/ 1/88
AVS-1603	CPE	HIV	----	0.32	MT-2	> 100.00	> 349.00	6/ 3/88
AVS-1603	CPE	HIV	----	0.87	MT-2	> 100.00	> 114.00	6/ 8/88
AVS-1603	CPE	HIV	----	0.13	MT-2	64.50	515.00	6/10/88
AVS-1603	CPE	HIV	----	1.07	MT-2	76.30	71.00	6/10/88
AVS-1603	CPE	HIV	----	< 0.10	MT-2	> 100.00	> 1000.00	6/16/88
AVS-1603	CPE	HIV	----	< 0.10	MT-2	> 100.00	> 1000.00	6/16/88
AVS-1603	CPE	HIV	----	0.15	MT-2	> 100.00	> 658.00	6/17/88
AVS-1603	CPE	HIV	----	< 0.10	MT-2	> 100.00	> 1000.00	6/21/88
AVS-1603	CPE	HIV	----	< 0.10	MT-2	80.50	> 805.00	6/22/88
AVS-1603	CPE	HIV	----	< 0.10	MT-2	76.90	> 769.00	6/22/88
AVS-1603	CPE	HIV	----	< 0.10	MT-2	> 100.00	> 1000.00	6/23/88
AVS-1603	CPE	HIV	----	< 0.10	MT-2	> 100.00	> 1000.00	6/23/88
AVS-1603	CPE	HIV	----	< 0.10	MT-2	> 100.00	> 1000.00	6/24/88
AVS-1603	CPE	HIV	----	< 0.10	MT-2	68.40	> 684.00	6/29/88
AVS-1603	CPE	HIV	----	< 0.10	MT-2	63.90	> 639.00	6/29/88
AVS-1603	CPE	HIV	----	< 0.01	MT-2	> 10.00	> 1000.00	7/15/88
AVS-1603	CPE	HIV	----	< 0.01	MT-2	> 10.00	> 1000.00	7/15/88
AVS-1603	CPE	HIV	----	< 0.01	MT-2	> 10.00	> 1000.00	7/20/88
AVS-1603	CPE	HIV	----	< 0.01	MT-2	> 10.00	> 1000.00	7/20/88

SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88

COMPOUND	PROTOCOL	VIRUS	VR	1050	CELL	HTC50	%	DATE	
AVS-1603	CPE	HIV	----	< 0.01	MT-2	>	10.00	>1000.00	7/26/88
AVS-1603	CPE	HIV	----	< 0.01	MT-2	>	10.00	>1000.00	7/26/88
AVS-1603	CPE	HIV	----	< 0.01	MT-2	>	10.00	>1000.00	8/ 9/88
AVS-1603	CPE	HIV	----	< 0.01	MT-2	>	10.00	>1000.00	8/10/88
AVS-1603	CPE	HIV	----	< 0.01	MT-2	>	10.00	>1000.00	8/12/88
AVS-1603	CPE	HIV	----	< 0.01	MT-2	>	10.00	>1000.00	8/14/88
AVS-1603	CPE	HIV	----	< 0.01	MT-2	>	10.00	>1000.00	8/14/88
AVS-1603	CPE	HIV	----	< 0.01	MT-2	>	10.00	>1000.00	8/23/88
AVS-1603	CPE	HIV	----	< 0.01	MT-2	>	10.00	>1000.00	8/23/88
AVS-1603	CPE	HIV	----	< 0.01	MT-2	>	10.00	>1000.00	8/31/88
AVS-1603	CPE	HIV	----	< 0.01	MT-2	>	10.00	>1000.00	9/ 7/88
AVS-1603	CPE	HIV	----	< 0.01	MT-2	>	10.00	>1000.00	9/ 7/88
AVS-1603	CPE	HIV	----	< 0.01	MT-2	>	10.00	>1000.00	9/14/88
AVS-1603	CPE	HIV	----	< 0.01	MT-2	>	10.00	>1000.00	9/14/88
AVS-1603	CPE	HIV	----	< 0.01	MT-2	>	10.00	>1000.00	9/22/88
AVS-1603	CPE	HIV	----	< 0.01	MT-2	>	10.00	>1000.00	9/22/88
AVS-1603	CPE	HIV	----	< 0.01	MT-2	>	10.00	>1000.00	9/23/88
AVS-1603	CPE	HIV	----	< 0.01	MT-2	>	10.00	>1000.00	9/29/88
AVS-1603	CPE	HIV	----	< 0.01	MT-2	>	10.00	>1000.00	10/ 5/88
AVS-1603	CPE	HIV	----	< 0.01	MT-2	>	10.00	>1000.00	10/ 5/88
AVS-1603	CPE	HIV	----	< 0.01	MT-2	>	10.00	>1000.00	10/ 6/88
AVS-1603	CPE	HIV	----	< 0.03	MT-2	>	10.00	>316.00	11/ 1/88
AVS-1603	CPE	HIV	----	< 0.03	MT-2	>	2.07	> 65.90	11/ 1/88
AVS-1603	CPE	HIV	----	< 0.03	MT-2	>	10.00	>316.00	11/ 9/88
AVS-1603	CPE	HIV	----	< 0.03	MT-2	>	10.00	>316.00	11/17/88
AVS-1603	CPE	HIV	----	< 0.03	MT-2	>	10.00	>316.00	11/17/88
AVS-1603	CPE	HIV	----	-----	MT-2	>	10.00	-----	11/19/88
AVS-1603	CPE	HIV	----	< 0.03	MT-2	>	10.00	>316.00	11/22/88
AVS-1603	CPE	HIV	----	< 0.03	MT-2	>	10.00	>316.00	11/22/88
AVS-1603	CPE	HIV	----	< 0.03	MT-2	>	10.00	>316.00	11/30/88
AVS-1603	CPE	HIV	----	< 0.03	MT-2	>	10.00	>316.00	11/30/88
AVS-1603	CPE	HIV	----	< 0.03	MT-2	>	10.00	>316.00	12/ 7/88
AVS-1603	CPE	HIV	----	< 0.03	MT-2	>	10.00	>308.00	12/ 7/88
AVS-1603	CPE	HIV	----	< 0.03	MT-2	>	10.00	>316.00	12/ 9/88
AVS-1603	CPE	HIV	----	0.10	MT-2	>	10.00	> 92.80	12/26/88
AVS-1603	CPE	HIV	----	0.17	MT-2	>	10.00	> 54.00	12/26/88
AVS-1645	CPE	HIV	----	51.60	MT-2	>	100.00	> 1.94	5/31/88
AVS-1704	CPE	HIV	----	-----	MT-2	>	7.06	-----	5/31/88
AVS-1754	CPE	HIV	----	-----	AT&T	>	100.00	-----	1/27/88
AVS-1759	CPE	HIV	----	-----	MT-2	>	100.00	-----	11/19/88
AVS-1760	CPE	HIV	----	60.80	MT-2	>	100.00	> 1.64	11/19/88
AVS-1760	CPE	HIV	----	-----	MT-2	>	100.00	-----	11/22/88
AVS-1764	CPE	HIV	----	-----	MT-2	>	100.00	-----	5/23/88
AVS-1764	CPE	HIV	----	-----	MT-2	>	100.00	-----	11/ 9/88
AVS-1764	CPE	HIV	----	-----	MT-2	>	20.40	-----	11/19/88
AVS-1772	CPE	HIV	----	-----	MT-2	>	46.40	-----	11/19/88
AVS-1777	CPE	HIV	----	-----	MT-2	<	0.32	-----	11/19/88
AVS-1782	CPE	HIV	----	-----	MT-2	<	0.32	-----	11/19/88
AVS-1784	CPE	HIV	----	-----	MT-2	<	0.32	-----	11/ 9/88
AVS-1790	CPE	HIV	0.35	-----	AT&T	>	100.00	-----	2/ 3/89
AVS-1790	CPE	HIV	-----	-----	MT-2	>	100.00	-----	4/14/89
AVS-1790	CPE	HIV	-----	-----	CEP	>	100.00	-----	4/26/89

SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88

COMPOUND	PROTOCOL	VIRUS	VR	ID50	CELL	NTC50	TI	DATE
AVS-1790	CPE	HIV	----	----	MT-2 >	100.00	----	5/23/88
AVS-1790	CPE	HIV	----	0.20	MT-2 <	21.40	103.00	6/22/88
AVS-1790	CPE	HIV	----	----	MT-2 <	0.32	----	11/ 9/88
AVS-1792	CPE	HIV	----	----	MT-2 <	0.32	----	11/ 9/88
AVS-1795	CPE	HIV	----	----	MT-2 <	0.32	----	11/ 9/88
AVS-1795	CPE	HIV	----	29.10	MT-2 <	55.00	1.89	11/ 9/88
AVS-1795	CPE	HIV	----	----	MT-2 <	5.16	----	11/22/88
AVS-1796	CPE	HIV	----	----	MT-2 <	0.32	----	11/ 9/88
AVS-1801	CPE	HIV	----	54.20	MT-2 >	100.00	>	1.85
AVS-1801	CPE	HIV	----	22.60	MT-2 >	100.00	>	4.42
AVS-1801	CPE	HIV	----	39.00	MT-2 >	100.00	>	2.54
AVS-1811	CPE	HIV	----	----	MT-2 >	100.00	----	12/ 9/88
AVS-1829	CPE	HIV	----	----	MT-2 >	100.00	----	5/18/88
AVS-1829	CPE	HIV	----	----	MT-2 <	21.00	----	7/15/88
AVS-1835	CPE	HIV	----	----	MT-2 >	100.00	----	5/ 9/88
AVS-1835	CPE	HIV	----	49.40	MT-2 >	100.00	>	2.03
AVS-1841	CPE	HIV	----	26.30	MT-2 >	100.00	>	5.80
AVS-1843	CPE	HIV	----	43.10	MT-2 >	100.00	>	2.32
AVS-1843	CPE	HIV	----	----	MT-2 >	100.00	----	10/ 5/88
AVS-1846	CPE	HIV	----	25.50	MT-2 >	100.00	>	3.92
AVS-1850	CPE	HIV	----	31.60	MT-2 >	100.00	>	3.16
AVS-1850	CPE	HIV	----	23.80	MT-2 >	100.00	>	4.20
AVS-1899	CPE	HIV	----	----	MT-2 >	100.00	----	5/31/88
AVS-1900	CPE	HIV	----	----	MT-2 >	100.00	----	5/31/88
AVS-1901	CPE	HIV	----	----	MT-2 >	100.00	----	5/31/88
AVS-1902	CPE	HIV	----	----	MT-2 >	100.00	----	5/31/88
AVS-1968	CPE	HIV	----	----	MT-2 <	2.10	----	10/ 5/88
AVS-1970	CPE	HIV	----	----	MT-2 <	21.40	----	10/ 5/88
AVS-1976	CPE	HIV	----	----	MT-2 <	55.00	----	9/14/88
AVS-2145	CPE	HIV	----	----	ATM8 >	100.00	----	2/17/88
AVS-2145	CPE	HIV	----	----	MT-2 >	100.00	----	4/14/88
AVS-2145	CPE	HIV	----	----	CEN >	100.00	----	6/26/88
AVS-2145	CPE	HIV	----	----	MT-2 >	100.00	----	5/23/88
AVS-2146	CPE	HIV	----	----	ATM8 >	100.00	----	1/27/88
AVS-2146	CPE	HIV	----	----	MT-2 >	100.00	----	4/14/88
AVS-2146	CPE	HIV	----	----	CEN <	0.22	----	6/26/88
AVS-2146	CPE	HIV	----	----	MT-2 >	100.00	----	5/23/88
AVS-2274	CPE	HIV	----	----	MT-2 <	58.00	----	6/14/88
AVS-2274	CPE	HIV	----	----	CEN <	61.10	----	6/26/88
AVS-2274	CPE	HIV	----	----	MT-2 <	61.70	----	5/26/88
AVS-2274	CPE	HIV	----	----	MT-2 <	56.50	----	7/20/88
AVS-2278	CPE	HIV	----	----	MT-2 <	70.40	----	6/14/88
AVS-2278	CPE	HIV	----	----	CEN <	61.70	----	6/26/88
AVS-2278	CPE	HIV	----	----	MT-2 >	100.00	----	5/24/88
AVS-2280	CPE	FELV	1.24	240.00	B1C >	320.00	>	1.33
AVS-2285	CPE	HIV	----	----	MT-2 >	100.00	----	5/24/88
AVS-2285	SI	SRV2	----	10.20	PAJ1 >	320.00	>	31.00
AVS-2286	CPE	HIV	----	----	MT-2 <	65.20	----	5/24/88
AVS-2291	CPE	FELV	2.16	9.70	B1C >	100.00	>	10.20
AVS-2290	CPE	HIV	----	----	MT-2 >	100.00	----	5/24/88

SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88

COMPOUND	PROTOCOL	VIRUS	VR	ID50	CELL	HTC50	TI	DATE
AVS-2299	CPE	HIV	----	----	MT-2	83.50	----	11/1/88
AVS-2301	CPE	HIV	----	----	MT-2	24.30	----	10/5/88
AVS-2311	CPE	HIV	----	----	MT-2	> 100.00	----	12/28/88
AVS-2317	CPE	HIV	----	----	MT-2	15.70	----	12/28/88
AVS-2325	CPE	HIV	----	----	MT-2	> 100.00	----	11/10/88
AVS-2340	CPE	HIV	----	----	ATM8	100.00	----	2/17/88
AVS-2340	CPE	HIV	----	----	MT-2	> 100.00	----	5/24/88
AVS-2340	SI	SRV2	-----	320.00	RAJI	> 320.00	> 1.00	2/26/88
AVS-2353	CPE	HIV	< 0.10	MT-2	> 100.00	> 1000.00	4/16/88	
AVS-2353	PR	FELV	-----	2.02	SC1	> 100.00	> 49.40	1/12/88
AVS-2353	SI	SRV2	-----	27.60	RAJI	> 320.00	> 11.50	3/7/88
AVS-2354	CPE	HIV	0.55	----	ATM8	3.20	----	1/30/88
AVS-2358	CPE	HIV	----	----	MT-2	2.26	----	5/24/88
AVS-2358	SI	SRV2	-----	3.76	RAJI	< 100.00	< 26.50	3/10/88
AVS-2359	CPE	HIV	----	----	ATM8	< 0.32	----	2/17/88
AVS-2359	CPE	HIV	----	----	MT-2	0.78	----	5/24/88
AVS-2365	CPE	HIV	----	----	MT-2	> 100.00	----	5/24/88
AVS-2393	CPE	FELV	0.80	----	81C	10.00	----	5/11/88
AVS-2393	CPE	HIV	----	----	ATM8	> 100.00	----	2/17/88
AVS-2393	CPE	HIV	----	----	MT-2	> 100.00	----	5/24/88
AVS-2393	SI	SRV2	-----	20.10	RAJI	> 320.00	> 15.80	6/9/88
AVS-2394	CPE	HIV	----	----	ATM8	3.20	----	2/17/88
AVS-2396	CPE	HIV	----	----	MT-2	> 100.00	----	5/24/88
AVS-2396	CPE	HIV	----	----	MT-2	> 100.00	----	11/10/88
AVS-2397	CPE	FELV	1.75	51.00	81C	100.00	1.96	5/11/88
AVS-2397	SI	SRV2	-----	13.50	RAJI	> 320.00	> 23.50	5/2/88
AVS-2397	SI	SRV2	-----	84.50	RAJI	> 320.00	> 3.78	9/6/88
AVS-2406	CPE	HIV	----	----	MT-2	0.20	----	11/10/88
AVS-2407	CPE	HIV	----	----	ATM8	1.00	----	2/17/88
AVS-2407	CPE	HIV	----	----	MT-2	9.72	----	5/24/88
AVS-2409	CPE	HIV	----	----	MT-2	58.30	----	11/10/88
AVS-2422	CPE	HIV	----	----	MT-2	63.80	----	5/23/88
AVS-2432	CPE	HIV	----	----	MT-2	> 100.00	----	12/28/88
AVS-2433	CPE	HIV	----	----	MT-2	> 100.00	----	12/28/88
AVS-2434	CPE	HIV	----	----	MT-2	> 100.00	----	12/28/88
AVS-2435	CPE	HIV	----	----	MT-2	22.60	----	12/28/88
AVS-2435	CPE	HIV	----	----	MT-2	> 100.00	----	12/28/88
AVS-2444	CPE	HIV	----	----	MT-2	> 100.00	----	5/24/88
AVS-2444	CPE	HIV	----	----	MT-2	> 100.00	----	11/10/88
AVS-2444	CPE	HIV	----	----	MT-2	> 100.00	----	11/22/88
AVS-2445	CPE	FELV	1.94	65.90	81C	32.00	0.70	6/3/88
AVS-2445	SI	SRV2	-----	4.81	RAJI	< 100.00	< 20.70	6/6/88
AVS-2448	CPE	FELV	1.22	----	81C	320.00	----	5/11/88
AVS-2448	SI	SRV2	-----	149.00	RAJI	> 320.00	> 2.14	9/6/88
AVS-2451	CPE	HIV	----	----	MT-2	17.50	----	12/28/88
AVS-2455	CPE	HIV	----	----	MT-2	1.92	----	5/23/88
AVS-2458	CPE	HIV	----	----	MT-2	5.23	----	12/28/88
AVS-2460	CPE	HIV	----	----	MT-2	63.30	----	11/10/88
AVS-2460	CPE	HIV	----	----	MT-2	> 100.00	----	11/22/88
AVS-2461	CPE	HIV	----	----	MT-2	23.40	----	11/10/88

SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88

COMPOUND	PROTOCOL	VIRUS	VR	1050	CELL	MTC50	TI	DATE
AVS-2481	CPE	HIV	----	----	MT-2	> 100.00	----	12/28/88
AVS-2482	CPE	HIV	----	----	MT-2	20.00	----	12/28/88
AVS-2483	CPE	HIV	----	----	MT-2	> 100.00	----	12/28/88
AVS-2488	CPE	HIV	----	----	ATM8	100.00	----	1/27/88
AVS-2488	CPE	HIV	----	----	MT-2	> 100.00	----	5/23/88
AVS-2499	CPE	HIV	----	----	MT-2	> 100.00	----	12/28/88
AVS-2502	CPE	HIV	----	----	ATM8	> 100.00	----	1/27/88
AVS-2502	CPE	HIV	----	----	MT-2	> 100.00	----	5/23/88
AVS-2520	CPE	HIV	----	----	MT-2	1.85	----	11/ 9/88
AVS-2525	CPE	HIV	----	----	MT-2	> 100.00	----	10/ 6/88
AVS-2527	CPE	HIV	----	----	MT-2	74.20	----	10/ 6/88
AVS-2528	CPE	HIV	----	----	MT-2	> 100.00	----	10/ 6/88
AVS-2543	CPE	HIV	----	----	MT-2	19.50	----	11/ 9/88
AVS-2563	CPE	FELV	0.05	----	B1C	3.20	----	2/26/88
AVS-2563	CPE	FELV	0.64	----	B1C	< 3.20	----	3/30/88
AVS-2565	CPE	HIV	----	----	MT-2	> 100.00	----	5/23/88
AVS-2565	CPE	HIV	----	----	MT-2	> 100.00	----	11/ 9/88
AVS-2567	CPE	HIV	----	----	ATM8	> 100.00	----	2/17/88
AVS-2567	CPE	HIV	----	----	MT-2	> 100.00	----	5/23/88
AVS-2569	CPE	HIV	----	----	ATM8	> 100.00	----	1/27/88
AVS-2569	CPE	HIV	----	----	MT-2	> 10.00	----	5/23/88
AVS-2572	CPE	HIV	----	----	ATM8	10.00	----	2/17/88
AVS-2572	CPE	HIV	----	< 0.01	MT-2	> 10.00	>1000.00	5/23/88
AVS-2573	CPE	HIV	----	----	ATM8	32.00	----	2/17/88
AVS-2573	CPE	HIV	----	< 0.01	MT-2	> 10.00	>1000.00	5/23/88
AVS-2574	CPE	FELV	0.67	----	B1C	100.00	----	2/ 4/88
AVS-2574	CPE	FELV	1.34	28.60	B1C	32.00	1.12	6/10/88
AVS-2574	CPE	HIV	1.20	----	ATM8	100.00	----	1/27/88
AVS-2574	CPE	HIV	----	----	MT-2	> 100.00	----	5/23/88
AVS-2574	SI	SRV2	----	14.70	RAJI	> 320.00	> 21.70	7/ 7/88
AVS-2573	CPE	HIV	----	< 0.10	MT-2	> 100.00	>1000.00	5/23/88
AVS-2576	CPE	HIV	0.60	17.80	ATM8	1.00	0.06	2/ 4/88
AVS-2576	CPE	HIV	----	< 0.10	MT-2	> 100.00	>1000.00	5/23/88
AVS-2578	SI	SRV2	----	0.58	RAJI	> 320.00	> 634.00	4/ 4/88
AVS-2581	CPE	HIV	----	----	ATM8	10.00	----	2/15/88
AVS-2581	CPE	HIV	----	< 0.10	MT-2	> 100.00	>1000.00	5/23/88
AVS-2582	CPE	HIV	0.60	----	ATM8	> 100.00	----	1/27/88
AVS-2582	CPE	HIV	----	< 0.10	MT-2	> 100.00	>1000.00	5/23/88
AVS-2585	CPE	FELV	1.65	12.00	B1C	32.00	2.65	5/11/88
AVS-2585	CPE	HIV	----	< 0.10	MT-2	> 100.00	>1000.00	5/23/88
AVS-2589	CPE	HIV	----	----	ATM8	3.20	----	1/11/88
AVS-2589	CPE	HIV	----	----	ATM8	10.00	----	2/15/88
AVS-2589	CPE	HIV	----	28.60	MT-2	> 100.00	> 3.52	5/23/88
AVS-2591	CPE	HIV	----	----	ATM8	1.00	----	1/11/88
AVS-2591	CPE	HIV	----	----	ATM8	10.00	----	2/15/88
AVS-2591	CPE	HIV	----	21.80	MT-2	> 100.00	> 4.59	5/23/88
AVS-2600	CPE	HIV	----	----	ATM8	3.20	----	1/11/88
AVS-2600	CPE	HIV	----	37.50	MT-2	> 100.00	> 2.67	5/23/88
AVS-2621	CPE	HIV	----	----	ATM8	10.00	----	1/11/88

**SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88**

COMPOUND	PROTOCOL	VIRUS	VR	1050	CELL	HTCS0	T1	DATE
AVS-2621	CPE	HIV	----	----	ATK8	32.00	----	2/15/88
AVS-2622	CPE	HIV	----	----	NT-2	> 100.00	----	11/10/88
AVS-2623	CPE	HIV	----	----	ATK8	32.00	----	1/11/88
AVS-2623	CPE	HIV	----	----	ATK8	100.00	----	1/27/88
AVS-2629	CPE	FELV	0.13	----	81C	10.00	----	5/11/88
AVS-2629	SI	SRV2	----	1.64	RALI	< 100.00	< 60.00	9/ 6/88
AVS-2635	CPE	FELV	1.52	23.40	81C	100.00	4.26	2/ 4/88
AVS-2639	CPE	FELV	1.65	6.75	81C	> 10.00	> 2.10	2/26/88
AVS-2639	CPE	FELV	2.31	0.71	81C	10.00	14.00	3/30/88
AVS-2639	CPE	FELV	2.10	0.83	81C	3.20	3.73	5/11/88
AVS-2639	CPE	FELV	2.72	0.99	81C	10.00	10.00	6/ 3/88
AVS-2639	CPE	FELV	2.14	0.84	81C	3.20	3.80	6/19/88
AVS-2639	CPE	FELV	2.69	0.59	81C	3.20	5.40	7/22/88
AVS-2639	CPE	HIV	4.55	< 0.10	ATK8	32.00	> 320.00	1/11/88
AVS-2639	CPE	HIV	4.70	< 0.10	ATK8	32.00	> 320.00	1/11/88
AVS-2639	CPE	HIV	4.35	< 0.10	ATK8	32.00	> 320.00	1/11/88
AVS-2639	CPE	HIV	4.55	< 0.10	ATK8	32.00	> 320.00	1/11/88
AVS-2639	CPE	HIV	4.55	< 0.10	ATK8	32.00	> 320.00	1/11/88
AVS-2639	CPE	HIV	1.20	----	ATK8	3.20	----	1/21/88
AVS-2639	CPE	HIV	5.15	< 0.10	ATK8	32.00	> 320.00	1/27/88
AVS-2639	CPE	HIV	5.80	< 0.10	ATK8	32.00	> 320.00	1/30/88
AVS-2639	CPE	HIV	3.45	< 0.10	ATK8	3.20	> 32.00	2/ 3/88
AVS-2639	CPE	HIV	5.25	< 0.10	ATK8	10.00	> 100.00	2/ 3/88
AVS-2639	CPE	HIV	1.90	0.10	ATK8	3.20	32.00	2/ 6/88
AVS-2639	CPE	HIV	1.90	0.10	ATK8	3.20	32.00	2/ 4/88
AVS-2639	CPE	HIV	6.85	< 0.10	ATK8	100.00	> 1000.00	2/10/88
AVS-2639	CPE	HIV	3.70	< 0.10	ATK8	10.00	> 100.00	2/15/88
AVS-2639	CPE	HIV	3.90	< 0.10	ATK8	10.00	> 100.00	2/17/88
AVS-2639	CPE	HIV	6.15	< 0.10	ATK8	32.00	----	3/ 4/88
AVS-2639	CPE	HIV	6.65	< 0.10	ATK8	32.00	> 320.00	3/18/88
AVS-2639	CPE	HIV	6.33	< 0.10	ATK8	32.00	> 320.00	3/23/88
AVS-2639	CPE	HIV	----	< 0.01	NT-2	5.90	> 590.00	3/23/88
AVS-2639	CPE	HIV	----	< 0.10	NT-2	61.30	> 613.00	3/26/88
AVS-2639	CPE	HIV	----	< 0.10	NT-2	29.60	> 296.00	3/29/88
AVS-2639	CPE	HIV	----	< 0.10	NT-2	31.60	> 316.00	3/29/88
AVS-2639	CPE	HIV	----	< 0.10	NT-2	30.60	> 306.00	4/ 1/88
AVS-2639	CPE	HIV	----	< 0.10	NT-2	11.90	> 119.00	4/ 6/88
AVS-2639	CPE	HIV	----	< 0.10	NT-2	53.40	> 534.00	4/ 6/88
AVS-2639	CPE	HIV	----	< 0.10	NT-2	29.40	> 294.00	4/ 6/88
AVS-2639	CPE	HIV	----	< 0.10	NT-2	38.30	> 383.00	4/ 7/88
AVS-2639	CPE	HIV	----	< 0.10	NT-2	57.70	> 577.00	4/12/88
AVS-2639	CPE	HIV	----	0.12	NT-2	27.70	217.00	4/14/88
AVS-2639	CPE	HIV	----	< 0.10	NT-2	23.50	> 235.00	4/15/88
AVS-2639	CPE	HIV	----	< 0.10	NT-2	30.60	> 306.00	4/15/88
AVS-2639	CPE	HIV	----	< 0.10	NT-2	73.60	> 736.00	4/16/88
AVS-2639	CPE	HIV	----	< 0.10	NT-2	67.70	> 677.00	4/16/88
AVS-2639	CPE	HIV	----	< 0.10	NT-2	56.70	> 567.00	4/22/88
AVS-2639	CPE	HIV	----	< 0.10	CEM	24.00	> 240.00	4/24/88
AVS-2639	CPE	HIV	----	< 0.10	NT-2	74.70	> 747.00	4/29/88
AVS-2639	CPE	HIV	----	0.43	NT-2	85.80	197.00	5/ 3/88

SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88

COMPOUND	PROTOCOL	VIRUS	VR	IC50	CELL	RTIC50	TI	DATE	
AVS-2639	CPE	HIV	----	1.79	MT-2	>	100.00	> 55.90	5/ 9/88
AVS-2639	CPE	HIV	----	1.61	MT-2	>	16.60	10.30	5/11/88
AVS-2639	CPE	HIV	----	0.75	MT-2	>	70.70	93.20	5/18/88
AVS-2639	CPE	HIV	----	1.55	MT-2	>	100.00	> 64.60	5/20/88
AVS-2639	CPE	HIV	----	0.23	MT-2	>	10.00	> 43.50	5/23/88
AVS-2639	CPE	HIV	----	0.43	MT-2	>	100.00	> 159.00	5/24/88
AVS-2639	CPE	HIV	----	3.13	MT-2	>	100.00	> 32.00	5/31/88
AVS-2639	CPE	HIV	----	0.75	MT-2	>	75.80	96.00	5/31/88
AVS-2639	CPE	HIV	----	2.44	MT-2	>	100.00	> 41.00	6/ 1/88
AVS-2639	CPE	HIV	----	3.43	MT-2	>	94.70	27.60	6/ 1/88
AVS-2639	CPE	HIV	----	2.32	MT-2	>	97.80	42.10	6/ 3/88
AVS-2639	CPE	HIV	----	6.49	MT-2	>	100.00	> 22.30	6/ 4/88
AVS-2639	CPE	HIV	----	0.48	MT-2	>	100.00	> 206.00	6/10/88
AVS-2639	CPE	HIV	----	1.22	MT-2	>	67.10	54.80	6/10/88
AVS-2639	CPE	HIV	----	0.10	MT-2	>	95.80	511.00	6/16/88
AVS-2639	CPE	HIV	----	0.36	MT-2	>	83.90	229.00	6/16/88
AVS-2639	CPE	HIV	----	1.56	MT-2	>	100.00	> 64.00	6/17/88
AVS-2639	CPE	HIV	----	2.73	MT-2	>	100.00	> 36.60	6/21/88
AVS-2639	CPE	HIV	----	0.10	MT-2	>	70.20	673.00	6/22/88
AVS-2639	CPE	HIV	----	< 0.10	MT-2	>	14.00	> 160.00	6/22/88
AVS-2639	CPE	HIV	----	0.43	MT-2	>	69.50	154.00	6/23/88
AVS-2639	CPE	HIV	----	< 0.10	MT-2	>	92.30	> 923.00	6/23/88
AVS-2639	CPE	HIV	----	< 0.10	MT-2	>	97.50	> 975.00	6/24/88
AVS-2639	CPE	HIV	----	0.23	MT-2	>	28.30	121.00	6/29/88
AVS-2639	CPE	HIV	----	0.24	MT-2	>	9.84	40.30	6/29/88
AVS-2639	CPE	HIV	----	0.22	MT-2	>	10.00	> 44.00	7/15/88
AVS-2639	CPE	HIV	----	0.06	MT-2	>	10.00	> 162.00	7/15/88
AVS-2639	CPE	HIV	----	0.07	MT-2	>	10.00	> 135.00	7/20/88
AVS-2639	CPE	HIV	----	0.15	MT-2	>	10.00	> 65.10	7/20/88
AVS-2639	CPE	HIV	----	0.07	MT-2	>	10.00	> 141.00	7/24/88
AVS-2639	CPE	HIV	----	0.05	MT-2	>	10.00	> 190.00	7/24/88
AVS-2639	CPE	HIV	----	0.04	MT-2	>	10.00	> 229.00	8/ 9/88
AVS-2639	CPE	HIV	----	0.07	MT-2	>	10.00	> 130.00	8/10/88
AVS-2639	CPE	HIV	----	0.11	MT-2	>	10.00	> 84.70	8/12/88
AVS-2639	CPE	HIV	----	0.12	MT-2	>	10.00	> 81.80	8/14/88
AVS-2639	CPE	HIV	----	0.11	MT-2	>	10.00	> 85.00	8/14/88
AVS-2639	CPE	HIV	----	0.03	MT-2	>	10.00	> 295.00	8/23/88
AVS-2639	CPE	HIV	----	0.05	MT-2	>	10.00	> 141.00	8/23/88
AVS-2639	CPE	HIV	----	0.09	MT-2	>	0.91	9.96	8/31/88
AVS-2639	CPE	HIV	----	0.14	MT-2	>	10.00	> 70.90	9/ 7/88
AVS-2639	CPE	HIV	----	0.50	MT-2	>	10.00	> 19.90	9/ 8/88
AVS-2639	CPE	HIV	----	0.30	MT-2	>	10.00	> 32.80	9/14/88
AVS-2639	CPE	HIV	----	0.03	MT-2	>	10.00	> 264.00	9/22/88
AVS-2639	CPE	HIV	----	0.04	MT-2	>	10.00	> 206.00	9/22/88
AVS-2639	CPE	HIV	----	0.08	MT-2	>	10.00	> 117.00	9/23/88
AVS-2639	CPE	HIV	----	0.11	MT-2	>	10.00	> 83.10	9/29/88
AVS-2639	CPE	HIV	----	0.09	MT-2	>	8.05	85.10	10/ 5/88
AVS-2639	CPE	HIV	----	0.29	MT-2	>	10.00	> 33.80	10/ 6/88
AVS-2639	CPE	HIV	----	0.14	MT-2	>	10.00	> 67.80	10/ 6/88
AVS-2639	CPE	HIV	----	0.18	MT-2	>	10.00	> 55.50	11/ 1/88

**SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88**

COMPOUND	PROTOCOL	VIRUS	VR	1050	CELL	NTC50	TI	DATE
AV3-2639	CPE	HIV	----	0.09	MT-2	6.18	63.80	11/ 1/88
AV3-2639	CPE	HIV	----	0.18	MT-2	> 10.00	> 53.30	11/ 9/88
AV3-2639	CPE	HIV	----	0.14	MT-2	> 10.00	> 67.70	11/17/88
AV3-2639	CPE	HIV	----	----	MT-2	> 10.00	----	11/19/88
AV3-2639	CPE	HIV	----	0.10	MT-2	> 10.00	> 87.90	11/22/88
AV3-2639	CPE	HIV	----	0.42	MT-2	> 10.00	> 16.10	11/22/88
AV3-2639	CPE	HIV	----	0.17	MT-2	> 10.00	> 57.70	11/30/88
AV3-2639	CPE	HIV	----	0.21	MT-2	> 10.00	> 46.90	11/30/88
AV3-2639	CPE	HIV	----	0.36	MT-2	8.92	29.40	12/ 7/88
AV3-2639	CPE	HIV	----	0.19	MT-2	9.42	48.00	12/ 7/88
AV3-2639	CPE	HIV	----	0.39	MT-2	> 10.00	> 25.50	12/ 9/88
AV3-2639	CPE	HIV	----	0.76	MT-2	> 10.00	> 13.10	12/20/88
AV3-2639	CPE	HIV	----	0.85	MT-2	> 10.00	> 11.70	12/28/88
AV3-2639	PR	MLV1	----	1.01	SC1	> 10.00	> 9.89	1/12/89
AV3-2639	SI	SRV2	----	0.05	RAJI	> 10.00	> 180.00	2/26/88
AV3-2639	SI	SRV2	----	0.16	RAJI	> 10.00	> 59.60	3/ 7/88
AV3-2639	SI	SRV2	----	3.38	RAJI	> 10.00	> 2.95	3/10/88
AV3-2639	SI	SRV2	----	0.02	RAJI	> 10.00	> 440.00	4/ 4/88
AV3-2639	SI	SRV2	----	1.65	RAJI	> 10.00	> 6.05	5/ 2/88
AV3-2639	SI	SRV2	----	0.05	RAJI	> 10.00	> 167.00	6/ 2/88
AV3-2639	SI	SRV2	----	0.35	RAJI	> 10.00	> 26.10	6/ 6/88
AV3-2639	SI	SRV2	----	0.25	RAJI	> 10.00	> 38.70	6/ 9/88
AV3-2639	SI	SRV2	----	0.34	RAJI	> 10.00	> 28.90	7/ 7/88
AV3-2639	SI	SRV2	----	5.30	RAJI	> 10.00	> 1.88	9/ 4/88
AV3-2642	CPE	HIV	----	----	MT-2	> 100.00	----	11/10/88
AV3-2643	CPE	HIV	----	----	MT-2	> 100.00	----	11/10/88
AV3-2645	CPE	HIV	----	----	MT-2	> 100.00	----	12/28/88
AV3-2647	CPE	HIV	----	----	MT-2	> 100.00	----	11/10/88
AV3-2648	CPE	HIV	----	----	MT-2	> 100.00	----	5/24/88
AV3-2648	CPE	HIV	----	----	MT-2	> 100.00	----	11/10/88
AV3-2657	CPE	FELV	1.44	16.90	8TC	< 100.00	< 5.89	6/10/88
AV3-2657	CPE	HIV	----	0.72	MT-2	> 100.00	> 138.00	5/24/88
AV3-2657	SI	SRV2	----	14.90	RAJI	> 320.00	> 21.60	6/ 2/88
AV3-2660	CPE	HIV	----	----	MT-2	> 100.00	----	10/ 4/88
AV3-2661	CPE	HIV	----	----	MT-2	> 100.00	----	10/ 4/88
AV3-2662	CPE	HIV	----	----	MT-2	> 100.00	----	10/ 4/88
AV3-2663	CPE	HIV	----	----	MT-2	> 100.00	----	10/ 4/88
AV3-2665	CPE	HIV	----	----	MT-2	> 100.00	----	11/10/88
AV3-2666	CPE	HIV	----	----	MT-2	> 100.00	----	11/10/88
AV3-2667	CPE	HIV	----	----	MT-2	> 100.00	----	10/ 4/88
AV3-2669	CPE	HIV	----	----	MT-2	> 100.00	----	10/ 4/88
AV3-2670	CPE	HIV	----	----	MT-2	> 100.00	----	12/28/88
AV3-2673	CPE	HIV	----	----	MT-2	2.46	----	11/10/88
AV3-2708	CPE	FELV	4.69	1.28	8TC	100.00	77.80	7/22/88
AV3-2708	CPE	HIV	----	14.20	MT-2	> 100.00	> 7.07	5/24/88
AV3-2708	SI	SRV2	----	10.00	RAJI	> 320.00	> 32.00	9/ 6/88
AV3-2748	CPE	FELV	0.22	----	8TC	0.32	----	2/ 4/88
AV3-2748	CPE	HIV	0.30	----	ATM8	< 1.00	----	1/11/88
AV3-2748	CPE	HIV	----	----	ATM8	< 0.32	----	2/15/88
AV3-2748	CPE	HIV	----	----	MT-2	0.92	----	5/26/88

SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88

COMPOUND	PROTOCOL	VIRUS	VR	1050	CELL	MT-20	TI	DATE
AVS-2748	CPE	HIV	----	----	MT-2	0.57	----	7/20/88
AVS-2749	CPE	HIV	----	----	MT-2 >	100.00	----	5/24/88
AVS-2749	CPE	HIV	----	----	MT-2 >	100.00	----	7/20/88
AVS-2752	CPE	HIV	----	----	MT-2 >	100.00	----	11/10/88
AVS-2753	CPE	HIV	----	----	MT-2 >	100.00	----	11/10/88
AVS-2760	CPE	HIV	----	----	ATNB	10.00	----	1/11/88
AVS-2760	CPE	HIV	----	----	ATNB	32.00	----	2/15/88
AVS-2760	CPE	HIV	----	53.00	MT-2 >	100.00 >	1.86	5/24/88
AVS-2760	CPE	HIV	----	----	MT-2 >	100.00	----	7/20/88
AVS-2811	CPE	HIV	----	----	ATNB <	0.10	----	3/18/88
AVS-2811	CPE	HIV	----	----	ATNB <	0.10	----	3/25/88
AVS-2811	CPE	HIV	----	----	MT-2 <	0.10	----	5/ 3/88
AVS-2811	CPE	HIV	----	----	MT-2 <	0.62	----	8/10/88
AVS-2811	CPE	HIV	----	----	MT-2 <	0.10	----	9/22/88
AVS-2812	CPE	FELV	0.05	----	81C <	3.20	----	2/26/88
AVS-2812	CPE	FELV	0.60	----	81C <	0.01	----	3/30/88
AVS-2812	CPE	HIV	----	----	ATNB <	0.10	----	3/18/88
AVS-2812	CPE	HIV	----	----	ATNB <	0.10	----	3/23/88
AVS-2812	CPE	HIV	----	----	MT-2 <	0.10	----	5/31/88
AVS-2867	CPE	HIV	----	----	ATNB	1.00	----	1/27/88
AVS-2867	CPE	HIV	----	----	MT-2	4.48	----	5/24/88
AVS-2882	CPE	HIV	----	----	MT-2 >	100.00	----	12/28/88
AVS-2893	CPE	HIV	----	----	MT-2 >	66.90	----	12/28/88
AVS-2904	CPE	HIV	----	----	MT-2 >	100.00	----	10/ 6/88
AVS-2905	CPE	HIV	----	----	MT-2	58.80	----	10/ 6/88
AVS-2908	CPE	HIV	----	----	MT-2	82.60	----	11/10/88
AVS-2911	CPE	HIV	----	----	ATNB	100.00	----	2/15/88
AVS-2920	CPE	HIV	----	----	MT-2 >	100.00	----	5/ 3/88
AVS-2920	CPE	HIV	3.90	----	MT-2 >	100.00 >	25.50	7/15/88
AVS-2920	CPE	HIV	----	----	MT-2 >	100.00	----	8/16/88
AVS-2920	CPE	HIV	----	----	MT-2 >	100.00	----	10/ 5/88
AVS-2921	CPE	HIV	----	33.90	MT-2 >	100.00 >	2.95	5/ 9/88
AVS-2921	CPE	HIV	----	8.60	MT-2 >	100.00 >	249.40	7/15/88
AVS-2922	CPE	HIV	----	51.48	MT-2 >	100.00 >	1.95	5/ 3/88
AVS-2922	CPE	HIV	----	16.60	MT-2 >	100.00 >	5.98	7/15/88
AVS-2923	CPE	HIV	----	----	MT-2 >	100.00	----	5/ 9/88
AVS-2923	CPE	HIV	----	----	MT-2 >	100.00	----	7/15/88
AVS-2924	CPE	HIV	----	----	MT-2 >	100.00	----	5/ 3/88
AVS-2924	CPE	HIV	----	----	MT-2 >	100.00	----	7/15/88
AVS-2925	CPE	HIV	----	----	MT-2 >	100.00	----	5/ 3/88
AVS-2925	CPE	HIV	----	----	MT-2 >	100.00	----	7/15/88
AVS-2953	CPE	HIV	3.95	< 0.10	ATNB	3.20 >	32.00	1/11/88
AVS-2953	CPE	HIV	4.05	< 0.10	ATNB	10.00 >	100.00	2/15/88
AVS-2953	CPE	HIV	----	< 0.10	MT-2 >	100.00 >	1000.00	5/24/88
AVS-2963	CPE	HIV	----	----	MT-2	59.00	----	11/10/88
AVS-2967	CPE	HIV	----	----	MT-2	58.70	----	12/28/88
AVS-2969	CPE	HIV	----	----	MT-2	0.71	----	11/10/88
AVS-2971	CPE	HIV	----	----	MT-2	21.00	----	11/10/88
AVS-2973	CPE	HIV	----	----	MT-2	59.40	----	12/28/88
AVS-2976	CPE	HIV	----	55.40	MT-2 >	100.00 >	1.81	10/ 6/88

SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88

COMPOUND	PROTOKA	VIRUS	VR	ID50	CELL	NTC50	TI	DATE
AVS-2980	CPE	FEV	0.40	----	81C	<	1.00	----
AVS-2991	CPE	HIV	0.45	----	ATM8	0.32	----	1/21/88
AVS-2991	CPE	HIV	----	----	ATM8	<	0.10	----
AVS-2992	CPE	XIV	0.40	----	ATM8	100.00	----	1/21/88
AVS-2992	CPE	HIV	1.60	1.80	ATM8	32.00	3.29	1/26/88
AVS-2992	CPE	HIV	----	----	MT-2	84.00	----	1/16/88
AVS-2993	CPE	HIV	----	----	ATM8	>	100.00	----
AVS-2994	CPE	HIV	1.40	11.20	ATM8	<	100.00	< 8.00
AVS-2994	CPE	HIV	0.35	----	ATM8	32.00	----	1/30/88
AVS-2994	CPE	HIV	----	----	ATM8	3.20	----	2/ 4/88
AVS-2995	CPE	HIV	----	----	ATM8	10.00	----	1/21/88
AVS-2995	CPE	HIV	0.50	----	ATM8	100.00	----	2/ 3/88
AVS-2996	CPE	HIV	1.60	3.98	ATM8	10.00	2.50	1/21/88
AVS-2996	CPE	HIV	0.10	----	ATM8	<	100.00	----
AVS-2996	CPE	HIV	1.30	3.20	ATM8	10.00	3.13	2/ 4/88
AVS-2996	SI	SRV2	----	3.68	RAJI	>	320.00	> 82.20
AVS-3245	CPE	HIV	----	----	MT-2	0.21	----	6/10/88
AVS-3246	CPE	XIV	----	----	ATM8	10.00	----	2/15/88
AVS-3247	CPE	HIV	----	----	ATM8	10.00	----	2/19/88
AVS-3247	CPE	HIV	----	----	MT-2	51.40	----	4/ 4/88
AVS-3248	CPE	HIV	----	----	MT-2	21.90	----	4/ 8/88
AVS-3249	CPE	HIV	----	----	MT-2	>	100.00	----
AVS-3250	CPE	HIV	----	----	MT-2	52.60	----	4/ 8/88
AVS-3251	CPE	HIV	----	----	MT-2	75.90	----	4/ 8/88
AVS-3252	CPE	HIV	----	----	MT-2	61.00	----	4/12/88
AVS-3253	CPE	HIV	----	----	MT-2	67.90	----	4/12/88
AVS-3254	CPE	HIV	----	----	MT-2	23.00	----	4/12/88
AVS-3255	CPE	HIV	----	----	MT-2	57.50	----	4/12/88
AVS-3256	CPE	HIV	----	----	MT-2	66.20	----	4/12/88
AVS-3257	CPE	HIV	----	----	MT-2	25.40	----	4/12/88
AVS-3258	CPE	HIV	----	0.63	MT-2	68.00	57.60	4/12/88
AVS-3259	CPE	HIV	----	----	MT-2	66.10	----	4/12/88
AVS-3260	CPE	HIV	----	6.50	MT-2	63.60	9.76	4/12/88
AVS-3261	CPE	HIV	----	----	MT-2	60.00	----	4/12/88
AVS-3262	CPE	HIV	----	----	MT-2	34.30	----	4/12/88
AVS-3263	CPE	HIV	----	----	MT-2	21.80	----	7/15/88
AVS-3264	CPE	HIV	----	----	MT-2	2.22	----	7/15/88
AVS-3265	CPE	HIV	----	----	MT-2	48.00	----	7/15/88
AVS-3266	CPE	HIV	----	----	MT-2	21.00	----	7/15/88
AVS-3267	CPE	HIV	----	----	MT-2	69.50	----	7/15/88
AVS-3268	CPE	HIV	----	7.40	MT-2	52.70	7.04	7/15/88
AVS-3269	CPE	HIV	----	----	MT-2	27.00	----	7/15/88
AVS-3270	CPE	HIV	----	----	MT-2	69.40	----	7/15/88
AVS-3270	CPE	HIV	----	----	MT-2	48.20	----	9/22/88
AVS-3271	CPE	XIV	----	----	MT-2	73.70	----	7/15/88
AVS-3272	CPE	HIV	----	----	MT-2	73.80	----	7/15/88
AVS-3273	CPE	HIV	----	----	MT-2	7.97	----	4/16/88
AVS-3274	CPE	HIV	----	----	MT-2	45.80	----	4/16/88
AVS-3275	CPE	HIV	----	----	MT-2	22.90	----	4/16/88
AVS-3276	CPE	HIV	----	----	MT-2	23.40	----	4/16/88

SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88

COMPOUND	PROTOCOL	VIRUS	VR	ID50	CELL	NTC50	TI	DATE
AVS-3277	CPE	HIV	----	----	MT-2	6.69	----	4/16/88
AVS-3278	CPE	HIV	----	8.70	MT-2	69.20	6.87	4/16/88
AVS-3280	CPE	HIV	----	----	MT-2	65.90	----	4/16/88
AVS-3282	CPE	HIV	----	----	MT-2	66.20	----	4/16/88
AVS-3284	CPE	HIV	----	< 0.10	MT-2	19.40	> 196.00	4/16/88
AVS-3286	CPE	HIV	----	----	MT-2	45.60	----	4/29/88
AVS-3287	CPE	HIV	----	----	MT-2	12.40	----	4/29/88
AVS-3289	CPE	HIV	----	----	MT-2	23.80	----	4/29/88
AVS-3292	CPE	HIV	----	----	MT-2	6.10	----	4/29/88
AVS-3293	CPE	HIV	----	----	MT-2	22.60	----	4/29/88
AVS-3294	CPE	HIV	----	----	MT-2	9.43	----	4/29/88
AVS-3295	CPE	HIV	----	----	MT-2	4.94	----	4/29/88
AVS-3296	CPE	HIV	----	----	MT-2	22.90	----	4/29/88
AVS-3297	CPE	HIV	----	----	MT-2	22.30	----	4/29/88
AVS-3298	CPE	HIV	----	----	MT-2	9.22	----	4/29/88
AVS-3299	CPE	HIV	----	----	MT-2	> 100.00	----	4/29/88
AVS-3299	CPE	HIV	----	----	MT-2	> 100.00	----	7/15/88
AVS-3300	CPE	HIV	----	----	MT-2	41.00	----	5/11/88
AVS-3300	CPE	HIV	----	----	MT-2	> 100.00	----	7/15/88
AVS-3301	CPE	HIV	----	----	MT-2	21.10	----	5/11/88
AVS-3301	CPE	HIV	23.30	----	MT-2	66.40	2.85	7/15/88
AVS-3301	CPE	HIV	----	----	MT-2	21.60	----	8/12/88
AVS-3303	CPE	HIV	----	----	ATM8	100.00	----	3/ 4/88
AVS-3304	CPE	HIV	----	----	ATM8	32.00	----	3/ 4/88
AVS-3305	CPE	HIV	----	----	ATM8	> 100.00	----	3/ 4/88
AVS-3306	CPE	HIV	----	----	ATM8	3.20	----	3/ 4/88
AVS-3307	CPE	HIV	----	----	ATM8	< 100.00	----	3/ 4/88
AVS-3308	CPE	HIV	----	----	ATM8	< 32.00	----	3/ 4/88
AVS-3309	CPE	HIV	----	----	ATM8	3.20	----	3/ 4/88
AVS-3310	CPE	HIV	----	----	ATM8	32.00	----	3/ 4/88
AVS-3311	CPE	HIV	----	----	ATM8	32.00	----	3/ 4/88
AVS-3312	CPE	HIV	----	----	ATM8	10.00	----	3/ 4/88
AVS-3314	CPE	HIV	----	----	ATM8	1.00	> 320.00	3/ 4/88
AVS-3315	CPE	HIV	----	----	MT-2	7.64	----	5/11/88
AVS-3315	CPE	HIV	----	----	MT-2	8.18	----	7/15/88
AVS-3317	CPE	HIV	----	----	MT-2	22.70	----	5/11/88
AVS-3317	CPE	HIV	----	----	MT-2	48.40	----	7/15/88
AVS-3318	CPE	HIV	----	----	MT-2	73.20	----	5/11/88
AVS-3318	CPE	HIV	19.20	----	MT-2	100.00	5.27	7/15/88
AVS-3320	CPE	HIV	----	----	MT-2	67.50	----	5/11/88
AVS-3320	CPE	HIV	----	----	MT-2	78.40	----	7/15/88
AVS-3321	CPE	HIV	----	----	MT-2	> 100.00	----	5/11/88
AVS-3321	CPE	HIV	----	----	MT-2	48.40	----	7/15/88
AVS-3322	CPE	HIV	----	----	MT-2	5.34	----	5/11/88
AVS-3322	CPE	HIV	19.20	----	MT-2	100.00	5.27	7/15/88
AVS-3324	CPE	HIV	----	----	MT-2	15.40	----	5/11/88
AVS-3324	CPE	HIV	----	----	MT-2	78.40	----	7/15/88
AVS-3325	CPE	HIV	----	----	MT-2	20.80	----	5/11/88
AVS-3325	CPE	HIV	----	----	MT-2	21.00	----	7/15/88
AVS-3326	CPE	HIV	----	----	MT-2	5.31	----	5/11/88

SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88

COMPOUND	PROTOCOL	VIRUS	VR	ID50	CELL	NTC50	TI	DATE
AVS-332A	CPE	HIV	----	-----	MT-2	7.84	----	7/15/88
AVS-3327	CPE	HIV	----	-----	MT-2	57.30	----	5/11/88
AVS-3327	CPE	HIV	----	-----	MT-2	58.80	----	7/15/88
AVS-3328	CPE	HIV	----	-----	MT-2	> 100.00	----	5/11/88
AVS-3328	CPE	HIV	----	-----	MT-2	> 100.00	----	7/15/88
AVS-3330	CPE	HIV	----	-----	MT-2	> 100.00	----	5/11/88
AVS-3330	CPE	HIV	----	-----	MT-2	> 100.00	----	7/15/88
AVS-3331	CPE	HIV	----	-----	MT-2	49.60	----	5/11/88
AVS-3331	CPE	HIV	----	-----	MT-2	68.10	----	7/15/88
AVS-3332	CPE	HIV	----	64.20	MT-2	> 100.00	> 1.55	4/29/88
AVS-3333	CPE	HIV	----	-----	MT-2	15.50	----	5/11/88
AVS-3333	CPE	HIV	----	-----	MT-2	3.94	----	7/15/88
AVS-3335	CPE	HIV	----	-----	MT-2	6.88	----	4/29/88
AVS-3335	CPE	HIV	----	-----	MT-2	6.59	----	7/15/88
AVS-3336	CPE	HIV	----	13.30	MT-2	> 100.00	> 7.51	4/29/88
AVS-3336	CPE	HIV	----	-----	MT-2	95.20	----	7/15/88
AVS-3337	CPE	HIV	----	-----	MT-2	0.24	----	4/29/88
AVS-3338	CPE	HIV	----	-----	MT-2	31.70	----	4/29/88
AVS-3339	CPE	HIV	----	-----	MT-2	22.60	----	4/29/88
AVS-3340	CPE	HIV	----	-----	MT-2	6.38	----	4/29/88
AVS-3341	CPE	HIV	----	-----	MT-2	> 100.00	----	4/16/88
AVS-3342	CPE	HIV	----	-----	MT-2	< 0.10	----	4/16/88
AVS-3343	CPE	HIV	----	-----	MT-2	7.34	----	4/16/88
AVS-3344	CPE	HIV	----	-----	MT-2	25.50	----	4/ 1/88
AVS-3344	CPE	HIV	----	7.30	MT-2	56.20	7.65	4/16/88
AVS-3345	CPE	HIV	----	< 0.10	MT-2	6.09	> 60.90	4/ 1/88
AVS-3345	CPE	HIV	----	-----	MT-2	6.88	----	4/16/88
AVS-3346	CPE	HIV	----	-----	MT-2	6.99	----	4/ 1/88
AVS-3346	CPE	HIV	----	-----	MT-2	8.89	----	4/16/88
AVS-3347	CPE	HIV	----	0.13	MT-2	19.20	146.00	4/ 1/88
AVS-3347	CPE	HIV	----	-----	MT-2	21.10	----	4/16/88
AVS-3348	CPE	HIV	----	-----	MT-2	0.37	----	10/ 6/88
AVS-3349	CPE	HIV	----	-----	MT-2	0.91	----	10/ 6/88
AVS-3350	CPE	HIV	----	-----	MT-2	7.38	----	12/28/88
AVS-3351	CPE	HIV	----	-----	MT-2	29.70	----	10/ 6/88
AVS-3352	CPE	HIV	----	-----	MT-2	6.98	----	12/28/88
AVS-3353	CPE	HIV	----	-----	MT-2	4.81	----	4/ 1/88
AVS-3353	CPE	HIV	----	-----	MT-2	3.41	----	4/16/88
AVS-3354	CPE	HIV	----	< 0.10	MT-2	9.38	> 93.90	4/ 1/88
AVS-3354	CPE	HIV	----	-----	MT-2	21.60	----	4/16/88
AVS-3355	CPE	HIV	----	-----	MT-2	24.00	----	10/ 6/88
AVS-3356	CPE	HIV	----	-----	MT-2	21.10	----	4/ 6/88
AVS-3357	CPE	HIV	----	-----	MT-2	7.02	----	4/ 6/88
AVS-3358	CPE	HIV	----	-----	MT-2	24.00	----	10/ 6/88
AVS-3359	CPE	HIV	----	-----	MT-2	22.00	----	4/ 6/88
AVS-3360	CPE	HIV	----	-----	MT-2	2.67	----	4/ 6/88
AVS-3361	CPE	HIV	----	0.82	MT-2	25.20	30.60	4/ 6/88
AVS-3362	CPE	HIV	----	4.80	MT-2	> 100.00	> 20.70	4/ 6/88
AVS-3363	CPE	HIV	----	-----	MT-2	21.00	----	4/ 6/88
AVS-3364	CPE	HIV	----	-----	MT-2	7.24	----	4/ 6/88

SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/85 TO 12/31/88

COMPOUND	PROTOCOL	VIRUS	VR	ICSO	CELL	HTC50	TI	DATE
AVS-3365	CPE	HIV	----	----	MT-2	21.00	----	4/ 6/88
AVS-3366	CPE	HIV	----	----	MT-2	21.00	----	4/ 6/88
AVS-3367	CPE	HIV	----	----	MT-2	0.46	----	4/ 6/88
AVS-3368	CPE	HIV	----	----	MT-2	21.00	----	4/22/88
AVS-3369	CPE	HIV	----	----	MT-2 >	100.00	----	4/22/88
AVS-3370	CPE	HIV	----	----	MT-2	0.84	----	4/22/88
AVS-3371	CPE	HIV	----	----	MT-2	21.10	----	4/22/88
AVS-3372	CPE	HIV	----	----	MT-2	16.70	----	4/22/88
AVS-3373	CPE	HIV	----	----	MT-2 >	100.00	----	4/22/88
AVS-3374	CPE	HIV	----	6.30	MT-2 >	100.00 >	15.50	4/22/88
AVS-3375	CPE	HIV	----	----	MT-2	0.96	----	4/22/88
AVS-3376	CPE	HIV	----	----	MT-2 >	100.00	----	4/22/88
AVS-3377	CPE	HIV	----	11.30	MT-2	70.00	6.20	4/22/88
AVS-3378	CPE	HIV	----	1.42	MT-2	22.20	12.20	4/22/88
AVS-3379	CPE	HIV	----	----	MT-2	20.66	----	4/15/88
AVS-3380	CPE	HIV	----	----	MT-2 >	100.00	----	4/15/88
AVS-3381	CPE	HIV	----	----	MT-2	21.30	----	4/22/88
AVS-3382	CPE	HIV	----	----	MT-2 >	100.00	----	4/22/88
AVS-3383	CPE	HIV	----	----	MT-2 >	100.00	----	4/22/88
AVS-3384	CPE	HIV	----	----	MT-2	24.60	----	12/28/88
AVS-3385	CPE	HIV	----	4.97	MT-2 >	100.00 >	20.10	12/28/88
AVS-3386	CPE	HIV	----	----	MT-2 >	100.00	----	4/22/88
AVS-3386	CPE	HIV	----	----	MT-2 >	100.00	----	7/15/88
AVS-3387	CPE	HIV	----	2.15	MT-2	26.40	12.30	4/22/88
AVS-3387	CPE	HIV	----	----	MT-2	54.0X	----	7/15/88
AVS-3388	CPE	HIV	----	----	MT-2	21.10	----	4/22/88
AVS-3388	CPE	HIV	----	----	MT-2	21.00	----	7/15/88
AVS-3389	CPE	HIV	----	----	MT-2	57.40	----	4/22/88
AVS-3390	CPE	HIV	----	----	MT-2 >	100.00	----	4/ 8/88
AVS-3390	CPE	HIV	----	----	MT-2 >	100.00	----	4/22/88
AVS-3391	CPE	HIV	----	----	MT-2 >	100.00	----	4/ 8/88
AVS-3391	CPE	HIV	----	----	MT-2 >	100.00	----	4/22/88
AVS-3391	CPE	HIV	----	----	MT-2 <	0.10	----	4/29/88
AVS-3392	CPE	HIV	----	46.60	MT-2 >	100.00 >	2.14	4/ 8/88
AVS-3392	CPE	HIV	----	33.50	MT-2 >	100.00 >	2.97	4/22/88
AVS-3393	CPE	HIV	----	----	MT-2 >	100.00	----	4/22/88
AVS-3393	CPE	HIV	----	----	MT-2 >	100.00	----	10/ 6/88
AVS-3394	CPE	HIV	----	----	MT-2 >	100.00	----	4/22/88
AVS-3394	CPE	HIV	----	----	MT-2 >	100.00	----	10/ 6/88
AVS-3395	CPE	HIV	----	----	MT-2	6.84	----	3/23/88
AVS-3396	CPE	HIV	----	----	MT-2 >	10.00	----	3/23/88
AVS-3397	CPE	HIV	----	1.01	MT-2 >	100.00 >	99.10	3/23/88
AVS-3398	CPE	HIV	----	----	MT-2 >	100.00	----	3/23/88
AVS-3399	CPE	HIV	----	----	MT-2	80.00	----	3/23/88
AVS-3400	CPE	HIV	----	----	MT-2 >	100.00	----	3/23/88
AVS-3401	CPE	HIV	----	----	MT-2 >	100.00	----	3/23/88
AVS-3402	CPE	HIV	----	----	MT-2 >	100.00	----	3/23/88
AVS-3403	CPE	HIV	----	----	MT-2 >	100.00	----	3/23/88
AVS-3404	CPE	HIV	----	----	MT-2 >	100.00	----	3/23/88
AVS-3405	CPE	HIV	----	----	MT-2	2.60	----	3/23/88

SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88

COMPOUND	PROTOCOL	VIRUS	VR	1050	CELL	NTC50	TI	DATE
AVS-34-08	CPE	HIV	----	----	MT-2	> 100.00	----	3/24/88
AVS-34-09	CPE	HIV	----	----	MT-2	> 100.00	----	3/24/88
AVS-34-10	CPE	HIV	----	----	MT-2	> 100.00	----	3/24/88
AVS-34-11	CPE	HIV	----	----	MT-2	6.21	----	3/24/88
AVS-34-12	CPE	HIV	----	----	MT-2	2.38	----	3/24/88
AVS-34-13	CPE	HIV	----	75.50	MT-2	> 100.00	> 1.32	3/24/88
AVS-34-14	CPE	HIV	----	----	MT-2	> 100.00	----	3/24/88
AVS-34-15	CPE	HIV	----	----	MT-2	47.30	----	3/24/88
AVS-34-16	CPE	HIV	----	----	MT-2	> 100.00	----	3/24/88
AVS-34-17	CPE	HIV	----	----	MT-2	6.56	----	3/24/88
AVS-34-18	CPE	HIV	----	----	MT-2	> 100.00	----	5/ 3/88
AVS-34-19	CPE	HIV	----	----	MT-2	> 100.00	----	7/15/88
AVS-34-19	CPE	HIV	----	----	MT-2	> 100.00	----	5/ 3/88
AVS-34-19	CPE	HIV	----	86.60	MT-2	> 100.00	> 1.14	7/15/88
AVS-34-20	CPE	HIV	----	----	MT-2	> 100.00	----	5/ 3/88
AVS-34-20	CPE	HIV	----	----	MT-2	> 100.00	----	7/15/88
AVS-34-21	CPE	HIV	----	----	MT-2	> 100.00	----	5/ 3/88
AVS-34-21	CPE	HIV	----	----	MT-2	> 100.00	----	8/10/88
AVS-34-22	CPE	HIV	----	----	MT-2	0.17	----	5/ 3/88
AVS-34-23	CPE	HIV	----	----	MT-2	32.00	----	5/ 3/88
AVS-34-24	CPE	HIV	----	----	MT-2	25.50	----	5/ 3/88
AVS-34-25	CPE	HIV	----	----	MT-2	> 100.00	----	5/ 3/88
AVS-34-25	CPE	HIV	----	----	MT-2	> 100.00	----	8/10/88
AVS-34-25	CPE	HIV	----	----	MT-2	> 100.00	----	8/31/88
AVS-34-26	CPE	HIV	----	----	MT-2	> 100.00	----	5/ 3/88
AVS-34-26	CPE	HIV	----	24.20	MT-2	> 100.00	> 4.12	8/10/88
AVS-34-26	CPE	HIV	----	----	MT-2	> 100.00	----	8/31/88
AVS-34-27	CPE	HIV	----	----	MT-2	21.00	----	5/ 3/88
AVS-34-27	CPE	HIV	----	----	MT-2	21.10	----	8/10/88
AVS-34-27	CPE	HIV	----	25.90	MT-2	57.40	2.21	9/29/88
AVS-34-28	CPE	HIV	----	----	MT-2	20.40	----	5/ 3/88
AVS-34-29	CPE	HIV	----	----	MT-2	> 100.00	----	5/ 3/88
AVS-34-30	CPE	HIV	----	----	MT-2	82.00	----	5/ 3/88
AVS-34-31	CPE	HIV	----	----	MT-2	67.50	----	5/ 3/88
AVS-34-31	CPE	HIV	----	----	MT-2	61.10	----	8/10/88
AVS-34-31	CPE	HIV	----	----	MT-2	62.20	----	8/31/88
AVS-34-32	CPE	HIV	----	----	MT-2	7.61	----	5/ 3/88
AVS-34-32	CPE	HIV	1.57	----	MT-2	7.75	4.96	8/10/88
AVS-34-32	CPE	HIV	----	----	MT-2	8.67	----	8/31/88
AVS-34-33	CPE	HIV	----	----	MT-2	58.30	----	5/ 3/88
AVS-34-33	CPE	HIV	----	17.50	MT-2	> 100.00	> 5.71	8/10/88
AVS-34-33	CPE	HIV	----	----	MT-2	> 100.00	----	8/31/88
AVS-34-34	CPE	HIV	----	----	MT-2	> 100.00	----	5/ 9/88
AVS-34-34	CPE	HIV	----	----	MT-2	> 100.00	----	8/10/88
AVS-34-35	CPE	HIV	----	----	MT-2	65.90	----	5/ 9/88
AVS-34-35	CPE	HIV	----	33.30	MT-2	> 100.00	> 2.99	8/10/88
AVS-34-35	CPE	HIV	----	----	MT-2	57.70	----	9/22/88
AVS-34-36	CPE	HIV	----	2.71	MT-2	21.00	7.74	5/ 9/88
AVS-34-36	CPE	HIV	----	4.71	MT-2	21.00	4.46	8/10/88
AVS-34-36	CPE	HIV	----	----	MT-2	20.10	----	9/22/88

SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88

COMPOUND	PROTOCOL	VIRUS	VR	ID50	CELL	HTC50	T1	DATE
AVS-3437	CPE	HIV	---	----	MT-2	0.07	----	5/ 9/88
AVS-3437	CPE	HIV	---	0.33	MT-2	8.95	26.80	8/10/88
AVS-3437	CPE	HIV	---	----	MT-2	11.90	----	9/22/88
AVS-3438	CPE	HIV	---	----	MT-2	> 100.00	----	5/ 9/88
AVS-3438	CPE	HIV	---	6.40	MT-2	> 100.00	> 15.50	8/10/88
AVS-3438	CPE	HIV	---	----	MT-2	69.20	----	9/22/88
AVS-3439	CPE	HIV	---	----	MT-2	> 100.00	----	5/ 9/88
AVS-3439	CPE	HIV	---	5.40	MT-2	> 100.00	> 18.50	8/10/88
AVS-3439	CPE	HIV	---	----	MT-2	> 100.00	----	9/22/88
AVS-3440	CPE	HIV	---	----	MT-2	> 100.00	----	5/ 9/88
AVS-3440	CPE	HIV	---	5.80	MT-2	> 100.00	> 17.00	8/10/88
AVS-3440	CPE	HIV	---	----	MT-2	> 100.00	----	9/22/88
AVS-3441	CPE	HIV	---	----	MT-2	> 100.00	----	5/ 9/88
AVS-3441	CPE	HIV	---	----	MT-2	> 100.00	----	8/10/88
AVS-3442	CPE	HIV	---	----	MT-2	29.80	----	5/ 9/88
AVS-3442	CPE	HIV	---	----	MT-2	20.30	----	8/10/88
AVS-3442	CPE	HIV	---	----	MT-2	58.50	----	9/22/88
AVS-3443	CPE	HIV	---	49.80	MT-2	> 100.00	> 2.01	5/ 9/88
AVS-3443	CPE	HIV	---	1.07	MT-2	59.00	55.30	8/10/88
AVS-3443	CPE	HIV	---	25.50	MT-2	60.20	2.35	9/22/88
AVS-3444	CPE	HIV	---	----	MT-2	69.40	----	5/ 9/88
AVS-3444	CPE	HIV	---	5.30	MT-2	52.40	9.85	8/10/88
AVS-3444	CPE	HIV	---	----	MT-2	61.20	----	9/22/88
AVS-3445	CPE	HIV	---	----	MT-2	6.59	----	5/ 9/88
AVS-3445	CPE	HIV	---	2.44	MT-2	7.15	2.93	8/10/88
AVS-3445	CPE	HIV	---	----	MT-2	7.21	----	8/31/88
AVS-3446	CPE	HIV	---	----	MT-2	7.84	----	10/ 6/88
AVS-3447	CPE	HIV	---	----	MT-2	> 100.00	----	5/11/88
AVS-3447	CPE	HIV	---	29.30	MT-2	> 100.00	> 3.61	7/20/88
AVS-3447	CPE	HIV	---	----	MT-2	> 100.00	----	8/16/88
AVS-3448	CPE	HIV	---	----	MT-2	65.90	----	5/11/88
AVS-3448	CPE	HIV	---	----	MT-2	> 100.00	----	7/20/88
AVS-3449	CPE	HIV	---	----	MT-2	67.80	----	5/11/88
AVS-3449	CPE	HIV	---	----	MT-2	28.20	----	7/20/88
AVS-3450	CPE	HIV	---	----	MT-2	6.48	----	10/ 6/88
AVS-3451	CPE	HIV	---	----	MT-2	> 100.00	----	5/11/88
AVS-3451	CPE	HIV	---	----	MT-2	> 100.00	----	7/20/88
AVS-3452	CPE	HIV	---	----	MT-2	74.70	----	5/11/88
AVS-3452	CPE	HIV	---	----	MT-2	> 100.00	----	7/20/88
AVS-3453	CPE	HIV	---	----	MT-2	9.55	----	5/31/88
AVS-3454	CPE	HIV	---	----	MT-2	24.50	----	5/31/88
AVS-3455	CPE	HIV	---	----	MT-2	14.80	----	6/ 1/88
AVS-3456	CPE	HIV	---	----	MT-2	7.28	----	5/31/88
AVS-3457	CPE	HIV	---	42.30	MT-2	> 100.00	> 2.34	6/ 1/88
AVS-3458	CPE	HIV	---	----	MT-2	82.10	----	6/ 1/88
AVS-3459	CPE	HIV	---	34.10	MT-2	> 100.00	> 2.93	6/ 1/88
AVS-3459	CPE	HIV	---	1.13	MT-2	> 10.00	> 8.85	9/22/88
AVS-3460	CPE	HIV	---	----	MT-2	> 100.00	----	6/ 1/88
AVS-3461	CPE	HIV	---	----	MT-2	0.19	----	6/ 1/88
AVS-3462	CPE	HIV	---	----	MT-2	> 100.00	----	5/31/88

**SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88**

COMPOUND	PROTOCOL	VIRUS	VR	1050	CELL	HTC50	T1	DATE
AVS-3463	CPE	HIV	----	----	NT-2 >	100.00	----	6/ 1/88
AVS-3464	CPE	HIV	----	----	NT-2	65.70	----	6/ 1/88
AVS-3465	CPE	HIV	----	----	NT-2	53.40	----	6/ 1/88
AVS-3466	CPE	HIV	----	1.50	NT-2	90.30	35.30	6/ 1/88
AVS-3466	CPE	HIV	----	----	NT-2	55.90	----	8/31/88
AVS-3467	CPE	HIV	----	----	NT-2	0.20	----	6/ 1/88
AVS-3467	CPE	HIV	----	----	NT-2 <	0.10	----	8/10/88
AVS-3467	CPE	HIV	----	----	NT-2 <	0.10	----	8/31/88
AVS-3468	CPE	HIV	----	----	NT-2	22.60	----	6/ 1/88
AVS-3468	CPE	HIV	----	----	NT-2	18.60	----	8/31/88
AVS-3469	CPE	HIV	----	----	NT-2	21.00	----	6/ 1/88
AVS-3469	CPE	HIV	----	----	NT-2	20.60	----	8/31/88
AVS-3470	CPE	HIV	----	----	NT-2	18.50	----	6/ 1/88
AVS-3470	CPE	HIV	----	----	NT-2	7.25	----	8/31/88
AVS-3471	CPE	HIV	----	----	NT-2	65.20	----	6/ 1/88
AVS-3472	CPE	HIV	----	----	NT-2	18.10	----	5/11/88
AVS-3472	CPE	HIV	----	----	NT-2	8.22	----	6/ 1/88
AVS-3472	CPE	HIV	----	----	NT-2	2.41	----	7/20/88
AVS-3472	CPE	HIV	----	----	NT-2	5.23	----	8/31/88
AVS-3473	CPE	HIV	----	----	NT-2	24.00	----	5/11/88
AVS-3473	CPE	HIV	----	----	NT-2 >	100.00	----	6/ 1/88
AVS-3473	CPE	HIV	----	----	NT-2 >	100.00	----	7/20/88
AVS-3475	CPE	HIV	----	----	NT-2 >	100.00	----	6/ 1/88
AVS-3475	CPE	HIV	----	----	NT-2	72.30	----	6/ 1/88
AVS-3478	CPE	HIV	----	----	NT-2 >	100.00	----	6/ 1/88
AVS-3479	CPE	HIV	----	----	NT-2	1.40	----	6/ 1/88
AVS-3480	CPE	HIV	----	----	NT-2	2.50	----	6/ 1/88
AVS-3481	CPE	HIV	----	----	NT-2	2.11	----	6/ 1/88
AVS-3482	CPE	HIV	----	----	NT-2	95.40	----	5/31/88
AVS-3483	CPE	HIV	----	----	NT-2	0.66	----	6/ 1/88
AVS-3484	CPE	HIV	----	----	NT-2	2.10	----	6/ 1/88
AVS-3484	CPE	HIV	----	----	NT-2	2.10	----	8/31/88
AVS-3485	CPE	HIV	----	----	NT-2	0.26	----	5/31/88
AVS-3485	CPE	HIV	----	----	NT-2 <	0.10	----	7/20/88
AVS-3486	CPE	HIV	----	----	NT-2 <	0.10	----	5/31/88
AVS-3486	CPE	HIV	----	----	NT-2 <	0.10	----	7/20/88
AVS-3487	CPE	HIV	----	----	NT-2	0.06	----	5/31/88
AVS-3487	CPE	HIV	----	----	NT-2 <	0.10	----	7/20/88
AVS-3488	CPE	HIV	----	----	NT-2	73.50	----	5/31/88
AVS-3488	CPE	HIV	----	----	NT-2	3.93	----	7/20/88
AVS-3489	CPE	HIV	----	----	NT-2	84.00	----	5/31/88
AVS-3489	CPE	HIV	----	----	NT-2	59.70	----	7/20/88
AVS-3490	CPE	HIV	----	----	NT-2 >	100.00	----	5/31/88
AVS-3490	CPE	HIV	----	----	NT-2	64.90	----	7/20/88
AVS-3491	CPE	HIV	----	0.46	NT-2	57.30	123.00	5/31/88
AVS-3491	CPE	HIV	51.10	----	NT-2 >	100.00	> 1.96	7/20/88
AVS-3491	CPE	HIV	52.90	----	NT-2 >	100.00	> 1.89	8/12/88
AVS-3492	CPE	HIV	----	----	NT-2 >	100.00	----	5/31/88
AVS-3492	CPE	HIV	----	----	NT-2 >	100.00	----	7/20/88

SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88

COMPOUND	PROTOCOL	VIRUS	VR	1050	CELL	HTC50	TI	DATE
AVS-3493	CPE	HIV	----	----	MT-2	> 100.00	----	5/31/88
AVS-3495	CPE	HIV	----	----	MT-2	> 100.00	----	7/20/88
AVS-3496	CPE	HIV	----	6.50	MT-2	> 100.00	> 15.30	5/31/88
AVS-3497	CPE	HIV	----	----	MT-2	> 100.00	----	7/20/88
AVS-3498	CPE	HIV	----	6.59	MT-2	6.59	----	5/31/88
AVS-3499	CPE	HIV	----	0.69	MT-2	21.30	30.60	5/31/88
AVS-3496	CPE	HIV	----	7.90	MT-2	21.80	2.74	7/20/88
AVS-3496	CPE	HIV	----	----	MT-2	21.00	----	8/12/88
AVS-3496	CPE	HIV	----	----	MT-2	8.10	----	10/ 5/88
AVS-3497	CPE	HIV	----	----	MT-2	2.10	----	5/31/88
AVS-3497	CPE	HIV	----	----	MT-2	2.11	----	7/20/88
AVS-3498	CPE	HIV	----	< 0.10	MT-2	2.27	> 22.70	5/31/88
AVS-3498	CPE	HIV	----	----	MT-2	2.11	----	7/20/88
AVS-3499	CPE	HIV	----	0.26	MT-2	0.66	2.45	5/31/88
AVS-3499	CPE	HIV	----	----	MT-2	2.11	----	7/20/88
AVS-3500	CPE	HIV	----	----	MT-2	2.23	----	5/31/88
AVS-3500	CPE	HIV	----	----	MT-2	2.10	----	7/20/88
AVS-3512	CPE	HIV	----	----	MT-2	0.10	----	5/31/88
AVS-3512	CPE	HIV	----	----	MT-2	0.59	----	7/20/88
AVS-3513	CPE	HIV	----	1.62	MT-2	> 100.00	> 61.80	5/31/88
AVS-3513	CPE	HIV	----	9.70	MT-2	80.50	8.22	7/20/88
AVS-3513	CPE	HIV	----	5.30	MT-2	> 100.00	> 18.70	8/12/88
AVS-3520	CPE	HIV	----	----	MT-2	20.70	----	3/24/88
AVS-3521	CPE	HIV	----	----	MT-2	66.80	----	10/ 6/88
AVS-3522	CPE	HIV	----	----	MT-2	> 100.00	----	10/ 6/88
AVS-3523	CPE	HIV	----	----	MT-2	> 100.00	----	3/24/88
AVS-3524	CPE	HIV	----	26.00	MT-2	> 100.00	> 3.85	3/24/88
AVS-3525	CPE	HIV	----	----	MT-2	> 100.00	----	3/24/88
AVS-3526	CPE	HIV	----	----	MT-2	> 100.00	----	3/24/88
AVS-3527	CPE	HIV	----	31.10	MT-2	8.31	0.27	3/24/88
AVS-3528	CPE	HIV	----	----	MT-2	> 100.00	----	3/24/88
AVS-3529	CPE	HIV	----	52.60	MT-2	0.43	0.01	3/24/88
AVS-3530	CPE	HIV	----	----	MT-2	> 100.00	----	3/24/88
AVS-3531	CPE	HIV	----	----	MT-2	> 100.00	----	3/24/88
AVS-3532	CPE	HIV	----	----	MT-2	> 100.00	----	3/24/88
AVS-3533	CPE	HIV	----	----	MT-2	> 100.00	----	3/24/88
AVS-3534	CPE	HIV	----	----	MT-2	> 100.00	----	3/24/88
AVS-3537	CPE	HIV	----	----	MT-2	2.97	----	4/ 6/88
AVS-3538	CPE	HIV	----	----	MT-2	59.70	----	4/ 6/88
AVS-3539	CPE	HIV	----	----	MT-2	6.57	----	4/ 6/88
AVS-3540	CPE	HIV	----	----	MT-2	> 100.00	----	4/ 6/88
AVS-3541	CPE	HIV	----	----	MT-2	> 100.00	----	4/ 6/88
AVS-3542	CPE	HIV	----	----	MT-2	7.17	----	4/ 6/88
AVS-3543	CPE	HIV	----	3.16	MT-2	0.25	0.08	4/ 6/88
AVS-3544	CPE	HIV	----	----	MT-2	> 100.00	----	4/ 6/88
AVS-3545	CPE	HIV	----	----	MT-2	75.10	----	4/ 6/88
AVS-3546	CPE	HIV	----	----	MT-2	> 100.00	----	4/ 6/88
AVS-3547	CPE	HIV	----	0.83	MT-2	21.60	25.80	4/ 6/88
AVS-3548	CPE	HIV	----	----	MT-2	> 100.00	----	4/ 6/88

**SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88**

COMPOUND	PROTOCOL	VIRUS	VR	1050	CELL	MTC50	TI	DATE
AVS-3549	CPE	HIV	----	----	MT-2	67.90	----	4/ 6/88
AVS-3550	CPE	HIV	----	----	MT-2	> 100.00	----	4/ 6/88
AVS-3551	CPE	HIV	----	----	MT-2	< 0.10	----	4/ 6/88
AVS-3552	CPE	HIV	----	----	MT-2	> 100.00	----	4/ 6/88
AVS-3553	CPE	HIV	----	----	MT-2	68.70	----	4/ 6/88
AVS-3556	CPE	HIV	----	----	MT-2	50.50	----	4/ 6/88
AVS-3557	CPE	HIV	----	----	MT-2	> 100.00	----	4/ 6/88
AVS-3558	CPE	HIV	----	----	MT-2	90.30	----	4/ 6/88
AVS-3559	CPE	HIV	----	----	MT-2	> 100.00	----	4/ 6/88
AVS-3560	CPE	HIV	----	----	MT-2	> 100.00	----	12/28/88
AVS-3561	CPE	HIV	----	----	MT-2	> 100.00	----	10/ 6/88
AVS-3562	CPE	HIV	----	----	MT-2	8.24	----	10/ 6/88
AVS-3563	CPE	HIV	----	70.00	MT-2	> 100.00	1.42	5/18/88
AVS-3572	CPE	HIV	----	----	MT-2	58.40	----	10/ 6/88
AVS-3573	CPE	HIV	----	----	MT-2	59.90	----	10/ 6/88
AVS-3574	CPE	HIV	----	----	MT-2	22.10	----	5/18/88
AVS-3575	CPE	HIV	----	70.00	MT-2	> 100.00	2.52	5/18/88
AVS-3576	CPE	HIV	----	----	MT-2	> 100.00	----	5/18/88
AVS-3577	CPE	HIV	----	----	MT-2	3.17	----	5/18/88
AVS-3578	CPE	HIV	----	----	MT-2	> 100.00	----	5/18/88
AVS-3579	CPE	HIV	----	----	MT-2	< 0.10	----	5/18/88
AVS-3580	CPE	HIV	----	----	MT-2	< 0.10	----	5/18/88
AVS-3581	CPE	HIV	----	----	MT-2	0.24	----	5/18/88
AVS-3582	CPE	HIV	----	----	MT-2	> 100.00	----	5/18/88
AVS-3583	CPE	HIV	----	----	MT-2	> 100.00	----	5/18/88
AVS-3584	CPE	HIV	----	----	MT-2	29.10	----	5/18/88
AVS-3586	CPE	HIV	----	----	MT-2	2.74	----	5/20/88
AVS-3587	CPE	HIV	----	----	MT-2	75.50	----	5/20/88
AVS-3588	CPE	HIV	----	----	MT-2	69.00	----	5/20/88
AVS-3589	CPE	HIV	----	----	MT-2	73.50	----	5/20/88
AVS-3590	CPE	HIV	----	----	MT-2	29.50	----	5/18/88
AVS-3593	CPE	HIV	----	----	MT-2	> 100.00	----	4/ 6/88
AVS-3595	CPE	HIV	----	----	MT-2	> 100.00	----	5/18/88
AVS-3597	CPE	HIV	----	----	MT-2	> 100.00	----	10/ 6/88
AVS-3604	CPE	HIV	----	----	MT-2	> 100.00	----	12/28/88
AVS-3605	CPE	HIV	----	----	MT-2	> 100.00	----	5/18/88
AVS-3606	CPE	HIV	----	----	MT-2	> 100.00	----	5/18/88
AVS-3607	CPE	HIV	----	----	MT-2	> 100.00	----	5/18/88
AVS-3608	CPE	HIV	----	----	MT-2	> 100.00	----	5/18/88
AVS-3609	CPE	HIV	----	----	MT-2	> 100.00	----	5/18/88
AVS-3610	CPE	HIV	----	----	MT-2	23.00	----	5/18/88
AVS-3611	CPE	HIV	----	----	MT-2	> 100.00	----	5/20/88
AVS-3612	CPE	HIV	----	----	MT-2	> 100.00	----	5/20/88
AVS-3613	CPE	HIV	----	----	MT-2	> 100.00	----	5/20/88
AVS-3614	CPE	HIV	----	----	MT-2	60.70	----	5/20/88
AVS-3625	CPE	HIV	----	----	MT-2	0.21	----	4/ 6/88
AVS-3677	CPE	HIV	----	----	MT-2	0.93	----	5/20/88
AVS-3678	CPE	HIV	----	----	MT-2	5.71	----	5/20/88

SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88

COMPOUND	PROTOCOL	VIRUS	VR	1050	CELL	NTC50	T1	DATE
AVS-3678	CPE	HIV	----	----	MT-2	6.59	----	7/20/88
AVS-3679	CPE	HIV	----	----	MT-2	2.26	----	5/20/88
AVS-3679	CPE	HIV	----	----	MT-2	7.18	----	7/20/88
AVS-3681	CPE	HIV	----	----	ATM8	32.00	----	2/ 3/88
AVS-3682	CPE	HIV	----	----	ATM8	< 32.00	----	2/ 3/88
AVS-3683	CPE	HIV	----	----	ATM8	32.00	----	2/ 3/88
AVS-3684	CPE	HIV	0.60	----	ATM8	100.00	----	2/ 3/88
AVS-3685	CPE	HIV	----	----	ATM8	100.00	----	2/ 3/88
AVS-3686	CPE	HIV	----	----	ATM8	32.00	----	2/ 3/88
AVS-3687	CPE	HIV	----	----	ATM8	> 100.00	----	2/ 3/88
AVS-3688	CPE	HIV	----	----	ATM8	< 100.00	----	2/ 3/88
AVS-3689	CPE	HIV	----	----	ATM8	0.32	----	2/ 4/88
AVS-3690	CPE	HIV	----	----	ATM8	1.00	----	2/ 4/88
AVS-3691	CPE	HIV	----	----	ATM8	32.00	----	2/ 4/88
AVS-3700	CPE	HIV	----	----	ATM8	32.00	----	2/ 4/88
AVS-3701	CPE	HIV	----	----	ATM8	32.00	----	2/ 4/88
AVS-3702	CPE	HIV	2.10	----	ATM8	> 100.00	----	2/ 4/88
AVS-3702	CPE	HIV	----	----	MT-2	> 100.00	----	11/10/88
AVS-3724	CPE	HIV	----	----	MT-2	65.50	----	5/31/88
AVS-3724	CPE	HIV	----	----	MT-2	68.20	----	7/20/88
AVS-3725	CPE	HIV	----	----	MT-2	65.90	----	5/31/88
AVS-3725	CPE	HIV	----	----	MT-2	58.60	----	7/20/88
AVS-3727	CPE	HIV	----	----	MT-2	> 100.00	----	6/ 3/88
AVS-3728	CPE	HIV	----	----	MT-2	> 100.00	----	6/ 3/88
AVS-3729	CPE	HIV	----	----	MT-2	> 100.00	----	6/ 3/88
AVS-3730	CPE	HIV	2.50	MT-2	> 100.00	> 40.10	6/ 3/88	
AVS-3731	CPE	HIV	----	----	MT-2	> 100.00	----	6/ 3/88
AVS-3732	CPE	HIV	----	----	MT-2	> 100.00	----	6/ 3/88
AVS-3733	CPE	HIV	----	----	MT-2	> 100.00	----	6/ 3/88
AVS-3734	CPE	HIV	----	----	MT-2	> 100.00	----	6/ 3/88
AVS-3735	CPE	HIV	----	----	MT-2	> 100.00	----	6/ 3/88
AVS-3736	CPE	HIV	----	----	MT-2	29.20	----	6/ 3/88
AVS-3737	CPE	HIV	----	----	MT-2	32.10	----	6/ 3/88
AVS-3738	CPE	HIV	----	----	MT-2	0.20	----	6/ 3/88
AVS-3739	CPE	HIV	----	----	MT-2	> 100.00	----	6/ 3/88
AVS-3740	CPE	HIV	----	----	MT-2	> 100.00	----	6/ 3/88
AVS-3741	CPE	HIV	----	----	MT-2	> 100.00	----	6/ 3/88
AVS-3742	CPE	HIV	----	----	MT-2	> 100.00	----	6/ 3/88
AVS-3743	CPE	HIV	----	----	MT-2	> 100.00	----	6/ 3/88
AVS-3744	CPE	HIV	2.26	MT-2	> 100.00	> 44.30	6/ 3/88	
AVS-3745	CPE	HIV	0.36	MT-2	> 100.00	> 276.00	6/ 3/88	
AVS-3746	CPE	HIV	----	----	MT-2	> 100.00	----	6/ 3/88
AVS-3747	CPE	HIV	----	----	MT-2	61.20	----	6/ 3/88
AVS-3748	CPE	HIV	----	----	MT-2	> 100.00	----	6/ 3/88
AVS-3749	CPE	HIV	----	----	MT-2	> 100.00	----	6/ 3/88
AVS-3750	CPE	HIV	----	----	MT-2	98.80	----	6/ 3/88
AVS-3751	CPE	HIV	----	----	MT-2	> 100.00	----	6/ 3/88
AVS-3752	CPE	HIV	----	----	MT-2	> 100.00	----	6/ 3/88
AVS-3753	CPE	HIV	----	----	MT-2	> 100.00	----	6/ 3/88
AVS-3754	CPE	HIV	----	----	MT-2	> 100.00	----	6/10/88

SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88

COMPOUND	PROTOCOL	VIRUS	VR	ID50	CELL	TC50	T1	DATE
AVS-3755	CPE	HIV	----	----	MT-2	> 100.00	----	6/10/88
AVS-3756	CPE	HIV	---	----	MT-2	> 100.00	----	6/10/88
AVS-3757	CPE	HIV	----	----	MT-2	> 100.00	----	6/10/88
AVS-3758	CPE	HIV	----	----	MT-2	> 100.00	----	6/10/88
AVS-3759	CPE	HIV	----	----	MT-2	> 100.00	----	6/10/88
AVS-3761	CPE	HIV	----	----	MT-2	> 100.00	----	6/10/88
AVS-3762	CPE	HIV	----	----	MT-2	6.13	----	6/10/88
AVS-3763	CPE	HIV	----	----	MT-2	< 0.10	----	6/10/88
AVS-3763	CPE	HIV	----	----	MT-2	> 100.00	----	6/10/88
AVS-3764	CPE	HIV	----	----	MT-2	69.00	----	6/10/88
AVS-3765	CPE	HIV	----	----	MT-2	21.00	----	6/10/88
AVS-3766	CPE	HIV	----	----	MT-2	73.10	----	6/10/88
AVS-3767	CPE	HIV	----	----	MT-2	19.60	----	6/10/88
AVS-3768	CPE	HIV	----	----	MT-2	> 100.00	----	6/10/88
AVS-3769	CPE	HIV	----	----	MT-2	8.35	----	6/10/88
AVS-3770	CPE	HIV	----	----	MT-2	> 100.00	----	6/10/88
AVS-3771	CPE	HIV	----	----	MT-2	75.50	----	6/10/88
AVS-3772	CPE	HIV	----	----	MT-2	68.90	----	6/10/88
AVS-3773	CPE	HIV	----	----	MT-2	51.40	----	6/10/88
AVS-3774	CPE	HIV	----	----	MT-2	7.15	----	6/10/88
AVS-3775	CPE	HIV	----	----	MT-2	> 100.00	----	6/10/88
AVS-3776	CPE	HIV	----	----	MT-2	> 100.00	----	6/10/88
AVS-3777	CPE	HIV	----	----	MT-2	> 100.00	----	6/10/88
AVS-3779	CPE	HIV	----	----	MT-2	> 100.00	----	6/10/88
AVS-3780	CPE	HIV	----	----	MT-2	0.66	----	6/10/88
AVS-3781	CPE	HIV	----	----	MT-2	0.73	----	6/10/88
AVS-3782	CPE	HIV	----	----	MT-2	0.72	----	6/10/88
AVS-3783	CPE	HIV	----	----	MT-2	0.76	----	6/10/88
AVS-3784	CPE	HIV	----	----	MT-2	1.92	----	6/10/88
AVS-3785	CPE	HIV	----	----	MT-2	2.10	----	7/20/88
AVS-3786	CPE	HIV	----	----	MT-2	2.11	----	7/20/88
AVS-3787	CPE	HIV	----	----	MT-2	2.11	----	7/20/88
AVS-3788	CPE	HIV	----	----	MT-2	57.10	----	7/20/88
AVS-3789	CPE	HIV	----	----	MT-2	10.90	----	7/20/88
AVS-3790	CPE	HIV	----	----	MT-2	81.40	----	7/20/88
AVS-3791	CPE	HIV	----	----	MT-2	< 0.10	----	7/20/88
AVS-3792	CPE	HIV	----	----	MT-2	0.22	----	7/20/88
AVS-3793	CPE	HIV	----	----	MT-2	0.23	----	7/20/88
AVS-3794	CPE	HIV	----	----	MT-2	< 0.10	----	7/20/88
AVS-3795	CPE	HIV	----	----	MT-2	22.40	----	7/26/88
AVS-3796	CPE	HIV	----	----	MT-2	16.60	----	7/26/88
AVS-3797	CPE	HIV	< 0.10	----	MT-2	9.93	> 99.30	7/26/88
AVS-3798	CPE	HIV	----	----	MT-2	21.40	----	7/26/88
AVS-3799	CPE	HIV	----	----	MT-2	0.88	----	7/26/88
AVS-3800	CPE	HIV	----	----	MT-2	0.45	----	8/31/88
AVS-3801	CPE	HIV	----	----	MT-2	0.21	----	8/31/88
AVS-3802	CPE	HIV	----	----	MT-2	< 0.10	----	7/26/88
AVS-3803	CPE	HIV	----	----	MT-2	2.50	----	7/26/88
AVS-3804	CPE	HIV	----	----	MT-2	7.22	----	7/26/88
AVS-3805	CPE	HIV	----	----	MT-2	21.10	----	7/26/88

SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88

COMPOUND	PROTOCOL	VIRUS	VR	ID50	CELL	HTC50	T1	DATE
AVS-3806	CPE	HIV	----	----	MT-2	> 100.00	----	6/23/88
AVS-3806	CPE	HIV	----	----	MT-2	> 100.00	----	7/26/88
AVS-3807	CPE	HIV	----	----	MT-2	68.40	----	6/23/88
AVS-3808	CPE	HIV	----	----	MT-2	53.40	----	6/23/88
AVS-3809	CPE	HIV	----	----	MT-2	21.40	----	6/23/88
AVS-3810	CPE	HIV	----	----	MT-2	> 100.00	----	6/23/88
AVS-3811	CPE	HIV	----	----	MT-2	22.40	----	6/23/88
AVS-3812	CPE	HIV	----	----	MT-2	23.50	----	6/23/88
AVS-3813	CPE	HIV	----	----	MT-2	> 100.00	----	6/23/88
AVS-3814	CPE	HIV	----	----	MT-2	2.42	----	6/23/88
AVS-3815	CPE	HIV	----	----	MT-2	50.00	----	6/23/88
AVS-3816	CPE	HIV	----	----	MT-2	71.50	----	6/23/88
AVS-3817	CPE	HIV	----	----	MT-2	21.10	----	6/23/88
AVS-3818	CPE	HIV	----	----	MT-2	22.20	----	6/23/88
AVS-3819	CPE	HIV	----	1.63	MT-2	> 100.00	> 61.30	6/23/88
AVS-3819	CPE	HIV	----	6.10	MT-2	66.90	10.90	8/15/88
AVS-3820	CPE	HIV	----	----	MT-2	> 100.00	----	6/23/88
AVS-3821	CPE	HIV	----	----	MT-2	25.20	----	6/23/88
AVS-3822	CPE	HIV	----	----	MT-2	59.60	----	6/23/88
AVS-3823	CPE	HIV	----	----	MT-2	> 100.00	----	6/23/88
AVS-3824	CPE	HIV	----	----	MT-2	> 100.00	----	6/23/88
AVS-3825	CPE	HIV	----	----	MT-2	> 100.00	----	6/23/88
AVS-3826	CPE	HIV	----	----	MT-2	64.10	----	6/23/88
AVS-3827	CPE	HIV	----	----	MT-2	76.30	----	6/23/88
AVS-3828	CPE	HIV	----	----	MT-2	24.90	----	6/23/88
AVS-3829	CPE	HIV	----	----	MT-2	27.00	----	6/23/88
AVS-3830	CPE	HIV	----	----	MT-2	66.60	----	6/23/88
AVS-3831	CPE	HIV	----	----	MT-2	25.80	----	6/23/88
AVS-3832	CPE	HIV	----	----	MT-2	25.70	----	6/23/88
AVS-3833	CPE	HIV	----	----	MT-2	> 100.00	----	6/23/88
AVS-3834	CPE	HIV	----	----	MT-2	> 100.00	----	6/23/88
AVS-3835	CPE	HIV	----	----	MT-2	> 100.00	----	6/23/88
AVS-3836	CPE	HIV	----	----	MT-2	> 100.00	----	6/23/88
AVS-3837	CPE	HIV	----	----	MT-2	> 100.00	----	6/23/88
AVS-3838	CPE	HIV	----	----	MT-2	> 100.00	----	6/23/88
AVS-3839	CPE	HIV	----	54.90	MT-2	> 100.00	> 1.82	6/23/88
AVS-3840	CPE	HIV	----	----	MT-2	< 0.10	----	6/23/88
AVS-3841	CPE	HIV	----	----	MT-2	21.00	----	6/23/88
AVS-3842	CPE	HIV	----	----	MT-2	9.78	----	6/23/88
AVS-3843	CPE	HIV	----	----	MT-2	2.01	----	6/23/88
AVS-3844	CPE	HIV	----	----	MT-2	> 100.00	----	6/23/88
AVS-3845	CPE	HIV	----	----	MT-2	21.10	----	6/23/88
AVS-3846	CPE	HIV	----	----	MT-2	23.40	----	6/23/88
AVS-3847	CPE	HIV	----	----	MT-2	58.10	----	6/23/88
AVS-3848	CPE	HIV	----	----	MT-2	> 100.00	----	6/23/88
AVS-3849	CPE	HIV	----	----	MT-2	56.70	----	6/23/88
AVS-3850	CPE	HIV	----	----	MT-2	> 100.00	----	6/24/88
AVS-3851	CPE	HIV	----	----	MT-2	> 100.00	----	6/24/88
AVS-3852	CPE	HIV	----	----	MT-2	50.40	----	6/24/88
AVS-3853	CPE	HIV	----	----	MT-2	57.40	----	6/24/88

SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88

COMPOUND	PROTOCOL	VIRUS	VR	ID50	CELL	ATC50	T1	DATE
AVS-3854	CPE	HIV	----	----	MT-2	61.50	----	6/24/88
AVS-3855	CPE	HIV	----	----	MT-2	58.70	----	6/24/88
AVS-3856	CPE	HIV	----	----	MT-2	6.63	----	6/24/88
AVS-3857	CPE	HIV	----	----	MT-2	2.66	----	6/24/88
AVS-3858	CPE	HIV	----	----	MT-2	6.92	----	6/24/88
AVS-3859	CPE	HIV	----	----	MT-2	0.10	----	6/24/88
AVS-3860	CPE	HIV	----	----	MT-2 >	100.00	----	6/24/88
AVS-3861	CPE	HIV	----	----	MT-2 >	100.00	----	6/24/88
AVS-3862	CPE	HIV	----	----	MT-2 >	100.00	----	6/24/88
AVS-3863	CPE	HIV	----	----	MT-2 >	100.00	----	6/24/88
AVS-3864	CPE	HIV	----	----	MT-2 >	100.00	----	6/24/88
AVS-3865	CPE	HIV	----	----	MT-2	0.93	----	6/24/88
AVS-3866	CPE	HIV	----	----	MT-2	17.70	----	6/24/88
AVS-3867	CPE	HIV	----	----	MT-2	59.60	----	6/24/88
AVS-3868	CPE	HIV	----	----	MT-2 >	100.00	----	6/24/88
AVS-3869	CPE	HIV	----	----	MT-2	0.28	----	6/24/88
AVS-3870	CPE	HIV	----	----	MT-2	69.10	----	6/24/88
AVS-3871	CPE	HIV	----	----	MT-2 >	100.00	----	6/24/88
AVS-3872	CPE	HIV	----	----	MT-2 >	100.00	----	6/24/88
AVS-3873	CPE	HIV	----	----	MT-2	9.69	----	6/24/88
AVS-3874	CPE	HIV	----	----	MT-2 >	100.00	----	6/24/88
AVS-3875	CPE	HIV	----	----	MT-2 >	100.00	----	6/24/88
AVS-3876	CPE	HIV	----	----	MT-2	84.30	----	6/24/88
AVS-3877	CPE	HIV	----	----	MT-2 >	100.00	----	6/24/88
AVS-3878	CPE	HIV	----	----	MT-2 >	100.00	----	6/24/88
AVS-3879	CPE	HIV	----	----	MT-2	17.10	----	6/24/88
AVS-3880	CPE	HIV	----	----	MT-2	15.10	----	6/24/88
AVS-3881	CPE	HIV	----	----	MT-2	60.20	----	6/24/88
AVS-3882	CPE	HIV	----	----	MT-2 >	100.00	----	6/24/88
AVS-3883	CPE	HIV	----	----	MT-2	53.80	----	6/24/88
AVS-3884	CPE	HIV	----	----	MT-2	50.80	----	6/24/88
AVS-3885	CPE	HIV	----	----	MT-2	6.59	----	6/24/88
AVS-3886	CPE	HIV	----	----	MT-2	21.00	----	6/24/88
AVS-3887	CPE	HIV	----	----	MT-2 >	100.00	----	6/24/88
AVS-3888	CPE	HIV	----	----	MT-2 >	100.00	----	6/24/88
AVS-3889	CPE	HIV	----	----	MT-2 >	100.00	----	6/24/88
AVS-3890	CPE	HIV	----	----	MT-2 >	100.00	----	6/24/88
AVS-3891	CPE	HIV	----	----	MT-2 >	100.00	----	6/24/88
AVS-3892	CPE	HIV	----	----	MT-2	4.33	----	6/24/88
AVS-3893	CPE	HIV	----	----	MT-2	7.03	----	6/24/88
AVS-3894	CPE	HIV	----	----	MT-2	7.33	----	6/24/88
AVS-3895	CPE	HIV	----	----	MT-2	27.00	----	6/24/88
AVS-3896	CPE	HIV	----	28.40	MT-2 >	100.00 >	3.52	6/24/88
AVS-3897	CPE	HIV	----	----	MT-2	19.80	----	6/24/88
AVS-3898	CPE	HIV	----	----	MT-2	44.90	----	6/24/88
AVS-3900	CPE	HIV	----	----	MT-2	0.21	----	6/24/88
AVS-3901	CPE	HIV	----	----	MT-2 >	100.00	----	6/24/88
AVS-3902	CPE	HIV	----	----	MT-2	95.20	----	6/31/88
AVS-3903	CPE	HIV	----	----	MT-2	20.30	----	6/31/88
AVS-3904	CPE	HIV	1.00	----	ATM8	100.00	----	2/ 3/88

**SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88**

COMPOUND	PROTOCOL	VIRUS	VR	I050	CELL	HTCSC	TI	DATE
AVS-3904	CPE	HIV	----	----	MT-2	4.67	----	11/10/88
AVS-3905	CPE	HIV	----	----	AT48	32.00	----	2/ 3/88
AVS-3905	CPE	HIV	----	----	MT-2 >	100.00	----	5/31/88
AVS-3905	CPE	HIV	----	----	MT-2 >	100.00	----	7/26/88
AVS-3906	CPE	HIV	----	----	MT-2	0.07	----	6/ 8/88
AVS-3907	CPE	HIV	----	----	MT-2 >	100.00	----	6/ 8/88
AVS-3908	CPE	HIV	0.17	MT-2 >	100.00	> 571.00	6/ 8/88	
AVS-3909	CPE	HIV	----	----	MT-2 >	100.00	----	6/ 8/88
AVS-3910	CPE	HIV	----	----	MT-2 >	100.00	----	6/ 8/88
AVS-3911	CPE	HIV	----	----	MT-2 >	100.00	----	6/ 8/88
AVS-3912	CPE	HIV	----	----	MT-2 >	100.00	----	6/ 8/88
AVS-3913	CPE	HIV	----	----	MT-2 >	100.00	----	6/ 8/88
AVS-3914	CPE	HIV	----	----	MT-2	65.00	----	6/ 8/88
AVS-3915	CPE	HIV	----	----	MT-2 >	100.00	----	6/ 8/88
AVS-3916	CPE	HIV	----	----	MT-2 >	100.00	----	6/ 8/88
AVS-3917	CPE	HIV	----	----	MT-2	95.10	----	6/ 8/88
AVS-3918	CPE	HIV	----	----	MT-2	69.90	----	6/ 8/88
AVS-3919	CPE	HIV	----	----	MT-2	21.80	----	6/ 8/88
AVS-3920	CPE	HIV	----	----	MT-2	26.30	----	6/ 8/88
AVS-3921	CPE	HIV	----	----	MT-2 >	100.00	----	6/ 8/88
AVS-3922	CPE	HIV	----	----	MT-2 >	100.00	----	6/ 8/88
AVS-3923	CPE	HIV	----	----	MT-2 >	100.00	----	6/ 8/88
AVS-3924	CPE	HIV	----	----	MT-2 >	100.00	----	6/ 8/88
AVS-3925	CPE	HIV	----	----	MT-2 <	0.32	----	11/ 9/88
AVS-3929	CPE	HIV	----	----	MT-2 <	0.32	----	11/ 9/88
AVS-3930	CPE	HIV	----	----	MT-2 <	0.32	----	11/ 9/88
AVS-3931	CPE	HIV	----	----	MT-2 >	100.00	----	11/17/88
AVS-3932	CPE	HIV	----	----	MT-2 >	100.00	----	11/17/88
AVS-3933	CPE	HIV	6.40	MT-2	61.20	9.56	7/26/88	
AVS-3934	CPE	HIV	----	----	MT-2 >	100.00	----	10/ 6/88
AVS-3937	CPE	HIV	----	----	MT-2 >	100.00	----	7/26/88
AVS-3938	CPE	HIV	----	----	MT-2 >	100.00	----	7/26/88
AVS-3939	CPE	HIV	0.43	MT-2	65.30	144.00	7/26/88	
AVS-3939	CPE	HIV	5.40	MT-2	58.40	10.80	8/12/88	
AVS-3940	CPE	HIV	----	----	MT-2 >	100.00	----	7/26/88
AVS-3941	CPE	HIV	----	----	MT-2 >	100.00	----	7/26/88
AVS-3942	CPE	HIV	----	----	MT-2 >	100.00	----	7/26/88
AVS-3943	CPE	HIV	----	----	MT-2 >	100.00	----	7/26/88
AVS-3944	CPE	HIV	----	----	MT-2 >	100.00	----	7/26/88
AVS-3945	CPE	HIV	----	----	MT-2 >	23.80	----	7/26/88
AVS-3946	CPE	HIV	----	----	MT-2 >	100.00	----	7/26/88
AVS-3947	CPE	HIV	----	----	MT-2 >	100.00	----	7/26/88
AVS-3962	CPE	HIV	----	----	MT-2 >	100.00	----	7/26/88
AVS-3963	CPE	HIV	----	----	MT-2 >	100.00	----	7/26/88
AVS-3963	CPE	HIV	----	----	MT-2 >	100.00	----	7/26/88
AVS-3966	CPE	HIV	0.31	MT-2	8.03	25.40	5/31/88	
AVS-3966	CPE	HIV	----	----	MT-2	7.01	----	7/26/88
AVS-3980	CPE	HIV	----	----	MT-2	17.90	----	12/ 9/88
AVS-3981	CPE	HIV	----	----	MT-2 >	100.00	----	12/ 9/88
AVS-3982	CPE	HIV	----	----	MT-2 >	100.00	----	12/ 9/88
AVS-3983	CPE	HIV	----	----	MT-2 >	100.00	----	12/ 9/88

SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88

COMPOUND	PROTOCOL	VIRUS	VR	1050	CELL	NTC50	TI	DATE
AVS-3984	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 9/88
AVS-3985	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 9/88
AVS-3986	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 9/88
AVS-3987	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 9/88
AVS-3988	CPE	HIV	----	----	MT-2	73.20	----	12/ 9/88
AVS-3989	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 9/88
AVS-3990	CPE	HIV	----	----	MT-2	75.00	----	12/ 9/88
AVS-3991	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 9/88
AVS-3992	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 9/88
AVS-3993	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 9/88
AVS-3994	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 9/88
AVS-3995	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 9/88
AVS-3996	CPE	HIV	----	----	MT-2	21.70	----	12/ 9/88
AVS-3997	CPE	HIV	----	----	MT-2	45.90	----	12/ 9/88
AVS-3998	CPE	HIV	----	----	MT-2	0.77	----	12/ 9/88
AVS-3999	CPE	HIV	----	----	MT-2	1.84	----	12/ 9/88
AVS-4000	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 9/88
AVS-4001	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 9/88
AVS-4002	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 9/88
AVS-4003	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 9/88
AVS-4004	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 9/88
AVS-4005	CPE	HIV	----	----	MT-2	66.90	----	12/ 9/88
AVS-4006	CPE	HIV	----	----	MT-2	75.00	----	12/ 9/88
AVS-4021	CPE	HIV	----	----	MT-2	59.90	----	12/ 9/88
AVS-4022	CPE	HIV	----	----	MT-2	36.50	----	12/ 9/88
AVS-4023	CPE	HIV	----	----	MT-2	99.70	----	12/ 9/88
AVS-4024	CPE	HIV	----	----	MT-2	32.30	----	12/ 9/88
AVS-4025	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 9/88
AVS-4027	CPE	HIV	----	----	MT-2	< 0.32	----	12/ 9/88
AVS-4028	CPE	HIV	----	----	MT-2	66.20	----	12/20/88
AVS-4029	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 9/88
AVS-4030	CPE	HIV	----	----	MT-2	63.60	----	12/ 9/88
AVS-4031	CPE	HIV	----	----	MT-2	22.10	----	12/ 9/88
AVS-4032	CPE	HIV	40.40	----	MT-2	> 100.00	> 2.48	12/ 9/88
AVS-4033	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 9/88
AVS-4034	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 9/88
AVS-4035	CPE	HIV	3.15	----	MT-2	> 100.00	> 31.80	12/ 9/88
AVS-4036	CPE	HIV	15.10	----	MT-2	> 100.00	> 6.63	12/ 9/88
AVS-4037	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 9/88
AVS-4038	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 9/88
AVS-4039	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 9/88
AVS-4040	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 9/88
AVS-4041	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 9/88
AVS-4042	CPE	HIV	44.20	----	MT-2	> 100.00	> 2.26	6/16/88
AVS-4042	CPE	HIV	----	----	MT-2	> 100.00	----	10/ 5/88
AVS-4043	CPE	HIV	----	----	MT-2	> 100.00	----	6/16/88
AVS-4044	CPE	HIV	----	----	MT-2	71.70	----	6/16/88
AVS-4045	CPE	HIV	----	----	MT-2	> 100.00	----	6/16/88
AVS-4046	CPE	HIV	----	----	MT-2	85.60	----	6/16/88
AVS-4047	CPE	HIV	----	----	MT-2	6.73	----	6/16/88

SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88

COMPOUND	PROTOCOL	VIRUS	VR	ID50	CELL	NTC50	T1	DATE	
AVS-4048	CPE	HIV	---	---	MT-2	----	----	6/16/88	
AVS-4048	CPE	HIV	---	---	MT-2	< 0.32	----	11/30/88	
AVS-4048	CPE	HIV	---	---	MT-2	< 0.32	----	12/28/88	
AVS-4049	CPE	HIV	---	---	MT-2	6.86	----	6/16/88	
AVS-4050	CPE	HIV	---	---	MT-2	6.75	----	6/16/88	
AVS-4051	CPE	HIV	---	---	MT-2	6.17	----	6/16/88	
AVS-4052	CPE	HIV	---	---	MT-2	> 100.00	----	6/16/88	
AVS-4053	CPE	HIV	---	75.60	MT-2	> 100.00	1.40	6/10/88	
AVS-4060	CPE	HIV	---	70.00	MT-2	> 100.00	>	1.41	6/10/88
AVS-4061	CPE	HIV	---	---	MT-2	> 100.00	----	12/ 9/88	
AVS-4062	CPE	HIV	---	---	MT-2	> 100.00	----	6/10/88	
AVS-4063	CPE	HIV	---	---	MT-2	14.90	----	6/10/88	
AVS-4064	CPE	HIV	---	---	MT-2	> 100.00	----	6/10/88	
AVS-4065	CPE	HIV	---	---	MT-2	< 0.10	----	6/10/88	
AVS-4065	CPE	HIV	---	---	MT-2	< 0.32	----	12/28/88	
AVS-4066	CPE	HIV	---	---	MT-2	> 100.00	----	6/10/88	
AVS-4067	CPE	HIV	---	---	MT-2	> 100.00	----	6/10/88	
AVS-4068	CPE	HIV	---	---	MT-2	24.70	----	6/10/88	
AVS-4069	CPE	HIV	---	---	MT-2	0.22	----	6/10/88	
AVS-4070	CPE	HIV	---	---	MT-2	< 0.10	----	6/10/88	
AVS-4070	CPE	HIV	---	---	MT-2	< 0.32	----	12/28/88	
AVS-4071	CPE	HIV	---	---	MT-2	> 100.00	----	6/10/88	
AVS-4073	CPE	HIV	---	---	MT-2	> 100.00	----	6/16/88	
AVS-4074	CPE	HIV	0.15	---	ATM8	0.32	----	3/18/88	
AVS-4074	CPE	HIV	---	---	MT-2	< 0.32	----	11/ 9/88	
AVS-4075	CPE	HIV	---	---	MT-2	< 0.32	----	11/ 9/88	
AVS-4076	CPE	HIV	---	---	MT-2	66.60	----	6/16/88	
AVS-4077	CPE	HIV	---	---	MT-2	> 100.00	----	6/16/88	
AVS-4078	CPE	HIV	---	---	MT-2	> 100.00	----	6/16/88	
AVS-4079	CPE	HIV	---	---	MT-2	99.50	----	6/16/88	
AVS-4080	CPE	HIV	---	---	MT-2	> 100.00	----	6/16/88	
AVS-4080	CPE	HIV	---	---	MT-2	> 100.00	----	6/17/88	
AVS-4081	CPE	HIV	---	---	MT-2	> 100.00	----	6/16/88	
AVS-4082	CPE	HIV	---	---	MT-2	> 100.00	----	10/ 6/88	
AVS-4083	CPE	HIV	---	---	MT-2	> 100.00	----	6/16/88	
AVS-4084	CPE	HIV	---	---	MT-2	< 0.10	----	6/16/88	
AVS-4084	CPE	HIV	---	---	MT-2	3.90	----	12/28/88	
AVS-4085	CPE	HIV	---	---	MT-2	88.80	----	6/16/88	
AVS-4086	CPE	HIV	---	---	MT-2	49.80	----	6/16/88	
AVS-4087	CPE	HIV	---	---	MT-2	73.10	----	6/16/88	
AVS-4088	CPE	HIV	---	---	MT-2	7.22	----	6/16/88	
AVS-4089	CPE	HIV	---	---	MT-2	9.31	----	6/16/88	
AVS-4090	CPE	HIV	---	---	MT-2	77.70	----	6/16/88	
AVS-4091	CPE	HIV	---	---	MT-2	> 100.00	----	6/16/88	
AVS-4092	CPE	HIV	---	---	MT-2	> 100.00	----	6/16/88	
AVS-4093	CPE	HIV	---	---	MT-2	7.74	----	6/17/88	
AVS-4094	CPE	HIV	---	---	MT-2	64.20	----	6/16/88	
AVS-4095	CPE	HIV	---	---	MT-2	> 100.00	----	6/16/88	
AVS-4096	CPE	HIV	---	---	MT-2	2.52	----	6/16/88	

SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88

COMPOUND	PROTOCOL	VIRUS	VR	1050	CELL	MTCSQ	T1	DATE
AVS-4100	CPE	HIV	----	----	MT-2	2.55	----	6/17/88
AVS-4101	CPE	HIV	----	0.34	MT-2	64.90	>100.00	6/22/88
AVS-4102	CPE	HIV	----	< 0.10	MT-2	21.10	>211.00	6/22/88
AVS-4103	CPE	HIV	----	----	MT-2	> 100.00	----	6/17/88
AVS-4104	CPE	HIV	----	----	MT-2	> 100.00	----	6/17/88
AVS-4105	CPE	HIV	----	----	MT-2	> 100.00	----	6/17/88
AVS-4106	CPE	HIV	----	----	MT-2	> 100.00	----	6/17/88
AVS-4107	CPE	HIV	----	----	MT-2	> 100.00	----	6/17/88
AVS-4108	CPE	HIV	----	----	MT-2	> 100.00	----	6/17/88
AVS-4109	CPE	HIV	----	----	MT-2	> 100.00	----	6/17/88
AVS-4110	CPE	HIV	----	----	MT-2	92.20	----	6/24/88
AVS-4111	CPE	HIV	----	----	MT-2	> 100.00	----	6/24/88
AVS-4112	CPE	HIV	----	----	MT-2	> 100.00	----	6/24/88
AVS-4113	CPE	HIV	----	----	MT-2	0.24	----	6/22/88
AVS-4114	CPE	HIV	----	----	MT-2	> 100.00	----	6/24/88
AVS-4115	CPE	HIV	----	----	MT-2	> 100.00	----	6/24/88
AVS-4116	CPE	HIV	----	----	MT-2	> 100.00	----	6/24/88
AVS-4117	CPE	HIV	----	----	MT-2	> 100.00	----	7/26/88
AVS-4118	CPE	HIV	----	3.97	MT-2	> 100.00	> 25.20	7/26/88
AVS-4119	CPE	HIV	----	----	MT-2	> 100.00	----	8/12/88
AVS-4120	CPE	HIV	----	----	MT-2	> 100.00	----	10/ 5/88
AVS-4121	CPE	HIV	----	----	MT-2	> 100.00	----	7/26/88
AVS-4122	CPE	HIV	----	----	MT-2	> 100.00	----	7/26/88
AVS-4123	CPE	HIV	----	----	MT-2	> 100.00	----	7/26/88
AVS-4124	CPE	HIV	----	----	MT-2	44.60	----	7/26/88
AVS-4125	CPE	HIV	----	----	MT-2	> 100.00	----	7/26/88
AVS-4126	CPE	HIV	----	----	MT-2	103.00	----	7/26/88
AVS-4127	CPE	HIV	----	----	MT-2	> 100.00	----	7/26/88
AVS-4128	CPE	HIV	----	----	MT-2	> 100.00	----	7/26/88
AVS-4129	CPE	HIV	----	----	MT-2	> 100.00	----	7/26/88
AVS-4130	CPE	HIV	----	----	MT-2	> 100.00	----	7/26/88
AVS-4131	CPE	HIV	----	----	MT-2	> 100.00	----	7/26/88
AVS-4132	CPE	HIV	----	----	MT-2	0.64	----	8/17/88
AVS-4133	CPE	HIV	----	< 0.10	MT-2	> 100.00	>1000.00	8/22/88
AVS-4133	CPE	HIV	----	----	MT-2	> 100.00	----	9/22/88
AVS-4134	CPE	HIV	----	< 0.10	MT-2	> 100.00	>1000.00	8/22/88
AVS-4134	CPE	HIV	----	----	MT-2	> 100.00	----	8/16/88
AVS-4134	CPE	HIV	----	----	MT-2	> 100.00	----	10/ 5/88
AVS-4135	CPE	HIV	----	23.50	MT-2	> 100.00	> 4.25	7/26/88
AVS-4135	CPE	HIV	----	----	MT-2	> 100.00	----	8/16/88
AVS-4135	CPE	HIV	----	----	MT-2	> 100.00	----	10/ 5/88
AVS-4136	CPE	HIV	----	----	MT-2	> 100.00	----	7/26/88
AVS-4137	CPE	HIV	----	----	MT-2	> 100.00	----	7/26/88
AVS-4138	CPE	HIV	----	72.90	MT-2	> 100.00	> 1.37	8/ 9/88
AVS-4138	CPE	HIV	----	6.60	MT-2	> 10.00	> 1.50	9/22/88
AVS-4139	CPE	HIV	----	54.70	MT-2	> 100.00	> 1.83	8/ 9/88
AVS-4139	CPE	HIV	----	52.70	MT-2	> 100.00	> 1.08	9/22/88
AVS-4140	CPE	HIV	----	11.80	MT-2	59.00	4.98	8/ 9/88
AVS-4140	CPE	HIV	----	----	MT-2	> 100.00	----	9/22/88
AVS-4141	CPE	HIV	----	----	MT-2	> 100.00	----	8/ 9/88

**SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88**

COMPOUND	PROTOCOL	VIRUS	WT	ID50	CELL	MT50	TI	DATE
AVS-4142	CPE	HIV	----	22.80	MT-2	> 100.00	>	4.38 6/17/88
AVS-4142	CPE	HIV	----	18.30	MT-2	> 100.00	>	5.46 8/12/88
AVS-4143	CPE	HIV	----	----	MT-2	> 100.00	----	6/17/88
AVS-4144	CPE	HIV	----	----	MT-2	> 100.00	----	6/17/88
AVS-4145	CPE	HIV	----	----	MT-2	> 100.00	----	6/17/88
AVS-4146	CPE	HIV	----	----	MT-2	6.12	----	6/17/88
AVS-4147	CPE	HIV	----	----	MT-2	26.20	----	6/17/88
AVS-4148	CPE	HIV	----	15.90	MT-2	82.70	5.21	6/17/88
AVS-4149	CPE	HIV	----	----	MT-2	> 100.00	----	8/ 9/88
AVS-4150	CPE	HIV	----	----	MT-2	> 100.00	----	6/29/88
AVS-4151	CPE	HIV	----	----	MT-2	> 100.00	----	6/29/88
AVS-4152	CPE	HIV	----	----	MT-2	0.71	----	6/29/88
AVS-4153	CPE	HIV	----	----	MT-2	> 100.00	----	6/29/88
AVS-4154	CPE	HIV	----	----	MT-2	58.00	----	6/29/88
AVS-4155	CPE	HIV	----	----	MT-2	1.85	----	6/29/88
AVS-4156	CPE	HIV	----	8.30	MT-2	> 100.00	>	12.00 8/ 7/88
AVS-4157	CPE	HIV	----	8.50	MT-2	22.70	2.65	8/ 9/88
AVS-4157	CPE	HIV	----	----	MT-2	25.90	----	9/22/88
AVS-4158	CPE	HIV	----	----	MT-2	7.01	----	8/ 9/88
AVS-4159	CPE	HIV	----	13.30	MT-2	> 100.00	>	7.51 8/ 9/88
AVS-4160	CPE	HIV	----	----	MT-2	> 100.00	----	8/ 9/88
AVS-4161	CPE	HIV	----	----	MT-2	> 100.00	----	8/ 9/88
AVS-4162	CPE	HIV	----	----	MT-2	> 100.00	----	8/ 9/88
AVS-4163	CPE	HIV	----	----	MT-2	26.00	----	8/ 9/88
AVS-4164	CPE	HIV	----	----	MT-2	> 100.00	----	8/ 9/88
AVS-4165	CPE	HIV	----	----	MT-2	28.90	----	8/ 9/88
AVS-4166	CPE	HIV	----	----	MT-2	> 100.00	----	8/ 9/88
AVS-4167	CPE	HIV	----	----	KT-2	0.66	----	8/ 9/88
AVS-4168	CPE	HIV	----	----	MT-2	> 100.00	----	8/ 9/88
AVS-4169	CPE	HIV	----	----	MT-2	> 100.00	----	8/ 9/88
AVS-4170	CPE	HIV	----	6.90	MT-2	> 100.00	>	14.20 4/ 1/88
AVS-4170	CPE	HIV	----	----	MT-2	> 100.00	----	4/16/88
AVS-4170	CPE	HIV	----	----	MT-2	> 100.00	----	6/22/88
AVS-4171	CPE	HIV	----	----	MT-2	> 100.00	----	8/ 9/88
AVS-4172	CPE	HIV	----	0.29	MT-2	> 100.00	>	345.00 8/ 9/88
AVS-4173	CPE	HIV	----	----	MT-2	64.00	----	6/17/88
AVS-4174	CPE	HIV	----	----	MT-2	> 100.00	----	6/17/88
AVS-4175	CPE	HIV	----	----	MT-2	7.41	----	6/17/88
AVS-4176	CPE	HIV	----	----	MT-2	26.40	----	6/17/88
AVS-4177	CPE	HIV	----	----	MT-2	9.09	----	6/17/88
AVS-4178	CPE	HIV	----	----	MT-2	9.67	----	6/17/88
AVS-4179	CPE	HIV	----	40.60	MT-2	> 100.00	>	2.67 6/21/88
AVS-4180	CPE	HIV	----	----	MT-2	> 100.00	----	6/21/88
AVS-4181	CPE	HIV	----	----	MT-2	> 100.00	----	4/21/88
AVS-4182	CPE	HIV	----	----	MT-2	58.90	----	6/21/88
AVS-4183	CPE	HIV	----	----	MT-2	21.50	----	6/21/88
AVS-4184	CPE	HIV	----	----	MT-2	> 100.00	----	6/21/88
AVS-4185	CPE	HIV	----	----	MT-2	19.60	----	6/21/88
AVS-4186	CPE	HIV	----	----	MT-2	57.60	----	6/21/88
AVS-4187	CPE	HIV	----	----	MT-2	78.60	----	6/21/88

**SUMMARY OF AIDS TESTING**  
FOR PERIOD OF 1/1/88 TO 12/31/88

COMPOUND	PROTOCOL	VIRUS	VR	1050	CELL	MC50	TI	LATE
AVS-4188	CPE	HIV	----	----	MT-2	25.70	----	6/21/88
AVS-4189	CPE	HIV	----	----	MT-2	> 100.00	----	6/21/88
AVS-4190	CPE	HIV	----	----	MT-2	2.10	----	6/21/88
AVS-4191	CPE	HIV	----	----	MT-2	60.40	----	6/21/88
AVS-4192	CPE	HIV	----	----	MT-2	21.10	----	6/21/88
AVS-4193	CPE	HIV	----	----	MT-2	> 100.00	----	6/21/88
AVS-4194	CPE	HIV	----	----	MT-2	> 100.00	----	6/21/88
AVS-4195	CPE	HIV	----	----	MT-2	> 100.00	----	6/21/88
AVS-4196	CPE	HIV	----	38.00	MT-2	> 100.00	>	2.63 6/21/88
AVS-4197	CPE	HIV	----	----	MT-2	> 100.00	----	10/ 5/88
AVS-4198	CPE	BIV	----	----	MT-2	> 100.00	----	6/21/88
AVS-4199	CPE	HIV	----	----	MT-2	> 100.00	----	6/21/88
AVS-4200	CPE	HIV	----	----	MT-2	76.10	----	6/21/88
AVS-4201	CPE	HIV	----	----	MT-2	> 100.00	----	6/22/88
AVS-4202	CPE	HIV	----	----	MT-2	23.50	----	6/22/88
AVS-4203	CPE	KIV	----	----	MT-2	> 100.00	----	6/22/88
AVS-4204	CPE	HIV	----	----	MT-2	> 100.00	----	8/ 9/88
AVS-4205	CPE	HIV	----	----	MT-2	> 100.00	----	8/21/88
AVS-4206	CPE	HIV	----	----	MT-2	> 100.00	----	9/22/88
AVS-4207	CPE	HIV	----	----	MT-2	91.00	----	9/22/88
AVS-4209	CPE	HIV	----	----	MT-2	> 100.00	----	8/31/88
AVS-4210	CPE	HIV	----	----	MT-2	0.13	----	8/31/88
AVS-4211	CPE	HIV	----	----	MT-2	> 100.00	----	8/31/88
AVS-4212	CPE	HIV	----	----	MT-2	> 100.00	----	9/22/88
AVS-4214	CPE	HIV	----	----	MT-2	> 100.00	----	9/22/88
AVS-4215	CPE	HIV	----	----	MT-2	> 100.00	----	9/29/88
AVS-4216	CPE	HIV	----	----	MT-2	70.60	----	9/29/88
AVS-4217	CPE	HIV	----	----	MT-2	22.60	----	9/29/88
AVS-4218	CPE	HIV	----	----	MT-2	> 100.00	----	8/31/88
AVS-4221	CPE	HIV	----	----	MT-2	57.40	----	9/22/88
AVS-4224	CPE	HIV	----	----	MT-2	> 100.00	----	8/16/88
AVS-4225	CPE	HIV	----	----	MT-2	> 100.00	----	8/16/88
AVS-4226	CPE	HIV	----	----	MT-2	> 100.00	----	8/16/88
AVS-4227	CPE	HIV	----	----	MT-2	> 100.00	----	8/16/88
AVS-4228	CPE	HIV	----	----	MT-2	21.00	----	8/16/88
AVS-4229	CPE	HIV	----	----	MT-2	0.44	----	8/16/88
AVS-4230	CPE	HIV	----	----	MT-2	0.44	----	8/16/88
AVS-4231	CPE	HIV	----	----	MT-2	> 100.00	----	8/16/88
AVS-4232	CPE	HIV	----	----	MT-2	> 100.00	----	8/16/88
AVS-4233	CPE	HIV	----	----	MT-2	73.50	----	9/22/88
AVS-4239	CPE	HIV	----	----	MT-2	6.59	----	8/22/88
AVS-4240	CPE	HIV	----	----	MT-2	48.40	----	8/22/88
AVS-4241	CPE	HIV	----	----	MT-2	22.20	----	8/22/88
AVS-4242	CPE	HIV	----	----	MT-2	> 100.00	----	8/22/88
AVS-4243	CPE	HIV	----	----	MT-2	> 100.00	----	8/22/88
AVS-4244	CPE	HIV	----	----	MT-2	51.80	----	8/22/88
AVS-4245	CPE	HIV	----	----	MT-2	> 100.00	----	8/22/88
AVS-4246	CPE	HIV	----	----	MT-2	52.50	----	8/22/88
AVS-4247	CPE	HIV	----	----	MT-2	29.20	----	8/22/88

SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88

COMPOUND	PROTOCOL	VIRUS	VR	ID50	CELL	WT50	T1	DATE
AVS-4248	CPE	HIV	----	----	NT-2	51.70	----	6/22/88
AVS-4249	CPE	HIV	----	----	NT-2	62.70	----	6/22/88
AVS-4250	CPE	HIV	----	----	NT-2	< 0.10	----	6/ 8/88
AVS-4250	CPE	HIV	----	----	NT-2	53.10	----	6/22/88
AVS-4251	CPE	HIV	----	31.20	NT-2	> 100.00	>	3.21 6/22/88
AVS-4252	CPE	HIV	----	----	NT-2	> 100.00	----	6/22/88
AVS-4253	CPE	HIV	----	----	NT-2	50.30	----	6/22/88
AVS-4254	CPE	HIV	----	----	NT-2	63.50	----	6/22/88
AVS-4255	CPE	HIV	----	----	NT-2	20.50	----	6/22/88
AVS-4256	CPE	HIV	----	----	NT-2	53.50	----	6/22/88
AVS-4257	CPE	HIV	----	----	NT-2	22.70	----	6/22/88
AVS-4258	CPE	HIV	----	----	NT-2	> 100.00	----	6/22/88
AVS-4259	CPE	HIV	----	----	NT-2	5.99	----	6/22/88
AVS-4261	CPE	HIV	----	----	NT-2	> 100.00	----	6/22/88
AVS-4262	CPE	HIV	----	----	NT-2	> 100.00	----	6/22/88
AVS-4263	CPE	HIV	----	----	NT-2	6.59	----	6/22/88
AVS-4264	CPE	HIV	----	----	NT-2	50.10	----	6/22/88
AVS-4265	CPE	HIV	----	----	NT-2	8.97	----	6/22/88
AVS-4266	CPE	HIV	----	----	NT-2	> 100.00	----	6/22/88
AVS-4267	CPE	HIV	----	----	NT-2	> 100.00	----	6/22/88
AVS-4268	CPE	HIV	----	----	NT-2	> 100.00	----	6/22/88
AVS-4269	CPE	HIV	----	----	NT-2	53.80	----	6/22/88
AVS-4270	CPE	HIV	----	----	NT-2	66.70	----	6/22/88
AVS-4271	CPE	HIV	----	----	NT-2	22.30	----	6/22/88
AVS-4272	CPE	HIV	----	----	NT-2	21.10	----	6/22/88
AVS-4273	CPE	HIV	----	----	NT-2	7.63	----	6/22/88
AVS-4276	CPE	HIV	----	----	NT-2	54.80	----	9/22/88
AVS-4277	CPE	HIV	----	2.59	NT-2	7.31	2.83	9/29/88
AVS-4288	CPE	HIV	----	----	NT-2	> 100.00	----	8/16/88
AVS-4289	CPE	HIV	----	----	NT-2	> 100.00	----	8/16/88
AVS-4290	CPE	HIV	----	----	NT-2	> 100.00	----	8/16/88
AVS-4291	CPE	HIV	----	----	NT-2	> 100.00	----	8/16/88
AVS-4292	CPE	HIV	----	----	NT-2	2.00	----	8/16/88
AVS-4293	CPE	HIV	----	----	NT-2	21.00	----	8/16/88
AVS-4296	CPE	HIV	----	----	NT-2	2.11	----	8/16/88
AVS-4295	CPE	HIV	----	----	NT-2	> 100.00	----	8/16/88
AVS-4296	CPE	HIV	----	----	NT-2	> 100.00	----	8/16/88
AVS-4296	CPE	HIV	----	----	NT-2	> 100.00	----	8/16/88
AVS-4297	CPE	HIV	----	----	NT-2	> 100.00	----	9/29/88
AVS-4310	CPE	HIV	----	----	NT-2	23.30	----	9/29/88
AVS-4320	CPE	HIV	----	----	NT-2	59.60	----	9/29/88
AVS-4321	CPE	HIV	----	----	NT-2	0.05	----	9/29/88
AVS-4323	CPE	HIV	----	----	NT-2	49.00	----	9/29/88
AVS-4325	CPE	HIV	----	24.60	NT-2	> 100.00	>	4.06 9/29/88
AVS-4326	CPE	HIV	----	----	NT-2	65.90	----	9/29/88
AVS-4327	CPE	HIV	----	----	NT-2	21.10	----	9/29/88
AVS-4328	CPE	HIV	----	----	NT-2	21.30	----	8/16/88
AVS-4328	CPE	HIV	----	----	NT-2	21.80	----	8/16/88
AVS-4329	CPE	HIV	----	----	NT-2	102.00	----	8/16/88
AVS-4329	CPE	HIV	----	----	NT-2	102.00	----	8/16/88

**SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88**

COMPOUND	PROTOCOL	VIRUS	VR	1050	CELL	HTC50	T1	DATE
AVS-4330	CPE	HIV	----	----	MT-2	22.50	----	8/16/88
AVS-4331	CPE	HIV	----	----	MT-2	> 100.00	----	8/16/88
AVS-4332	CPE	HIV	----	----	MT-2	80.70	----	8/16/88
AVS-4333	CPE	HIV	----	----	MT-2	> 100.00	----	8/16/88
AVS-4334	CPE	HIV	----	----	MT-2	> 100.00	----	8/16/88
AVS-4335	CPE	HIV	----	----	MT-2	76.20	----	8/16/88
AVS-4336	CPE	HIV	----	----	MT-2	> 100.00	----	8/16/88
AVS-4337	CPE	HIV	----	----	MT-2	> 100.00	----	8/16/88
AVS-4338	CPE	HIV	----	----	MT-2	59.40	----	8/16/88
AVS-4339	CPE	HIV	----	----	MT-2	52.50	----	8/16/88
AVS-4340	CPE	HIV	----	----	MT-2	> 100.00	----	8/16/88
AVS-4341	CPE	HIV	----	----	MT-2	74.00	----	8/23/88
AVS-4342	CPE	HIV	----	1.63	MT-2	7.53	4.41	8/23/88
AVS-4343	CPE	HIV	----	----	MT-2	71.50	----	8/23/88
AVS-4344	CPE	HIV	----	----	MT-2	31.60	----	8/23/88
AVS-4345	CPE	HIV	----	13.10	MT-2	62.20	4.70	8/23/88
AVS-4346	CPE	HIV	----	----	MT-2	66.70	----	10/ 5/88
AVS-4347	CPE	HIV	----	1.64	MT-2	> 100.00	> 69.20	8/23/88
AVS-4348	CPE	HIV	----	----	MT-2	> 100.00	----	10/ 5/88
AVS-4349	CPE	HIV	----	----	MT-2	61.30	----	8/23/88
AVS-4350	CPE	HIV	----	----	MT-2	9.72	----	8/23/88
AVS-4351	CPE	HIV	----	0.77	MT-2	> 100.00	> 129.00	8/23/88
AVS-4352	CPE	HIV	----	----	MT-2	> 100.00	----	10/ 5/88
AVS-4353	CPE	HIV	----	----	MT-2	> 100.00	----	8/23/88
AVS-4354	CPE	HIV	----	----	MT-2	> 100.00	----	8/23/88
AVS-4355	CPE	HIV	----	----	MT-2	> 100.00	----	8/23/88
AVS-4356	CPE	HIV	----	----	MT-2	> 100.00	----	8/23/88
AVS-4357	CPE	HIV	----	0.19	MT-2	21.40	109.00	8/23/88
AVS-4357	CPE	HIV	----	< 0.01	MT-2	2.18	> 218.00	9/29/88
AVS-4358	CPE	HIV	----	----	MT-2	> 100.00	----	8/23/88
AVS-4359	CPE	HIV	----	----	MT-2	6.66	----	8/23/88
AVS-4360	CPE	HIV	----	----	MT-2	> 100.00	----	8/23/88
AVS-4361	CPE	HIV	----	----	MT-2	> 100.00	----	8/23/88
AVS-4362	CPE	HIV	----	----	MT-2	66.40	----	8/23/88
AVS-4363	CPE	HIV	----	----	MT-2	26.10	----	8/23/88
AVS-4364	CPE	HIV	----	----	MT-2	58.10	----	8/23/88
AVS-4365	CPE	HIV	----	6.30	MT-2	22.30	3.53	8/23/88
AVS-4365	CPE	HIV	----	----	MT-2	2.14	----	9/29/88
AVS-4366	CPE	HIV	----	----	MT-2	67.10	----	8/23/88
AVS-4367	CPE	HIV	----	----	MT-2	> 100.00	----	8/23/88
AVS-4368	CPE	HIV	----	----	MT-2	71.70	----	8/23/88
AVS-4369	CPE	HIV	----	----	MT-2	> 100.00	----	8/23/88
AVS-4370	CPE	HIV	----	----	MT-2	71.50	----	8/23/88
AVS-4371	CPE	HIV	----	----	MT-2	56.70	----	8/23/88
AVS-4372	CPE	HIV	----	----	MT-2	21.00	----	8/23/88
AVS-4373	CPE	HIV	----	----	MT-2	23.00	----	8/23/88
AVS-4374	CPE	HIV	----	----	MT-2	> 100.00	----	8/23/88

SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88

COMPOUND	PROTOCOL	VIRUS	VR	TD50	CELL	NTC50	TI	DATE
AVS-4375	CPE	HIV	----	----	MT-2	21.30	----	8/23/88
AVS-4376	CPE	HIV	----	26.10	MT-2	66.80	2.55	8/22/88
AVS-4376	CPE	HIV	----	----	MT-2	> 100.00	----	9/14/88
AVS-4376	CPE	HIV	----	----	MT-2	7.18	----	9/29/88
AVS-4377	CPE	HIV	----	----	MT-2	> 100.00	----	8/23/88
AVS-4377	CPE	HIV	----	----	MT-2	> 100.00	----	9/14/88
AVS-4377	CPE	HIV	----	----	MT-2	> 100.00	----	9/29/88
AVS-4378	CPE	HIV	----	17.60	MT-2	77.50	4.40	8/23/88
AVS-4378	CPE	HIV	----	----	MT-2	48.40	----	9/14/88
AVS-4378	CPE	HIV	----	----	MT-2	> 100.00	----	9/29/88
AVS-4379	CPE	HIV	----	----	MT-2	94.20	----	8/23/88
AVS-4380	CPE	HIV	----	----	MT-2	> 100.00	----	8/23/88
AVS-4381	CPE	HIV	----	----	MT-2	6.62	----	8/23/88
AVS-4382	CPE	HIV	----	----	MT-2	> 100.00	----	8/23/88
AVS-4383	CPE	HIV	----	54.70	MT-2	> 100.00	>	1.63 8/23/88
AVS-4383	CPE	HIV	----	----	MT-2	> 100.00	----	9/29/88
AVS-4395	CPE	HIV	----	----	MT-2	> 100.00	----	8/23/88
AVS-4397	CPE	HIV	----	1.62	MT-2	17.00	10.50	9/ 7/88
AVS-4397	CPE	HIV	----	3.76	MT-2	32.90	8.76	9/29/88
AVS-4398	CPE	HIV	----	----	MT-2	73.00	----	9/ 7/88
AVS-4399	CPE	HIV	----	----	MT-2	> 100.00	----	9/ 7/88
AVS-4400	CPE	HIV	----	----	MT-2	45.90	----	9/ 7/88
AVS-4401	CPE	HIV	----	----	MT-2	57.40	----	9/ 7/88
AVS-4402	CPE	HIV	----	----	MT-2	70.20	----	9/ 7/88
AVS-4403	CPE	HIV	----	----	MT-2	> 100.00	----	9/ 7/88
AVS-4404	CPE	HIV	----	----	MT-2	21.10	----	9/ 7/88
AVS-4405	CPE	HIV	----	----	MT-2	< 0.10	----	9/ 7/88
AVS-4406	CPE	HIV	----	----	MT-2	21.10	----	9/ 7/88
AVS-4407	CPE	HIV	----	----	MT-2	76.40	----	9/ 7/88
AVS-4408	CPE	HIV	----	----	MT-2	76.80	----	9/ 7/88
AVS-4409	CPE	HIV	----	----	MT-2	21.10	----	9/ 7/88
AVS-4410	CPE	HIV	----	----	MT-2	> 100.00	----	9/ 7/88
AVS-4411	CPE	HIV	----	----	MT-2	> 100.00	----	9/ 7/88
AVS-4412	CPE	HIV	----	----	MT-2	> 100.00	----	9/ 7/88
AVS-4413	CPE	HIV	----	----	MT-2	> 100.00	----	9/ 7/88
AVS-4414	CPE	HIV	----	----	MT-2	61.30	----	9/ 7/88
AVS-4415	CPE	HIV	----	----	MT-2	62.40	----	9/ 7/88
AVS-4416	CPE	HIV	----	----	MT-2	64.00	----	9/ 7/88
AVS-4417	CPE	HIV	----	----	MT-2	> 100.00	----	9/ 7/88
AVS-4418	CPE	HIV	----	----	MT-2	> 100.00	----	9/ 7/88
AVS-4419	CPE	HIV	----	----	MT-2	24.60	----	9/ 7/88
AVS-4420	CPE	HIV	----	----	MT-2	68.00	----	9/ 7/88
AVS-4421	CPE	HIV	----	----	MT-2	> 100.00	----	9/ 7/88
AVS-4422	CPE	HIV	----	----	MT-2	> 100.00	----	9/ 7/88
AVS-4423	CPE	HIV	----	----	MT-2	65.70	----	9/ 7/88
AVS-4424	CPE	HIV	----	----	MT-2	> 100.00	----	9/ 7/88
AVS-4425	CPE	HIV	----	----	MT-2	> 100.00	----	9/ 7/88
AVS-4426	CPE	HIV	----	----	MT-2	6.62	----	9/ 7/88
AVS-4427	CPE	HIV	----	----	MT-2	> 100.00	----	9/ 7/88
AVS-4428	CPE	HIV	----	----	MT-2	> 100.00	----	9/ 7/88

**SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88**

COMPOUND	PROTOCOL	VIRUS	VA	10 <sup>50</sup>	CELL	HTC50	T1	DATE
AVS-4429	CPE	HIV	----	----	MT-2	2.11	----	9/ 7/88
AVS-4430	CPE	HIV	----	----	MT-2	> 100.00	----	9/ 7/88
AVS-4431	CPE	HIV	----	----	MT-2	> 100.00	----	9/ 8/88
AVS-4432	CPE	HIV	----	----	MT-2	67.10	----	9/ 8/88
AVS-4433	CPE	HIV	----	----	MT-2	57.40	----	9/ 8/88
AVS-4434	CPE	HIV	----	----	MT-2	25.00	----	9/ 8/88
AVS-4435	CPE	HIV	----	----	MT-2	48.00	----	9/ 8/88
AVS-4436	CPE	HIV	----	----	MT-2	20.80	----	9/ 8/88
AVS-4437	CPE	HIV	----	----	MT-2	0.68	----	9/ 8/88
AVS-4438	CPE	HIV	----	----	MT-2	2.14	----	9/ 8/88
AVS-4439	CPE	HIV	----	----	MT-2	21.10	----	9/ 8/88
AVS-4440	CPE	HIV	----	----	MT-2	20.10	----	9/ 8/88
AVS-4441	CPE	HIV	----	----	MT-2	6.67	----	9/ 8/88
AVS-4442	CPE	HIV	----	----	MT-2	0.69	----	9/ 8/88
AVS-4443	CPE	HIV	----	----	MT-2	26.00	----	9/ 8/88
AVS-4444	CPE	HIV	----	----	MT-2	2.00	----	9/ 8/88
AVS-4445	CPE	HIV	----	----	MT-2	94.60	----	9/ 8/88
AVS-4446	CPE	HIV	55.10	MT-2	> 100.00	> 1.81	9/ 8/88	
AVS-4446	CPE	HIV	26.50	MT-2	> 100.00	> 3.78	9/29/88	
AVS-4447	CPE	HIV	----	----	MT-2	> 100.00	----	9/ 8/88
AVS-4448	CPE	HIV	----	----	MT-2	62.80	----	9/ 8/88
AVS-4449	CPE	HIV	----	----	MT-2	> 100.00	----	9/ 8/88
AVS-4450	CPE	HIV	----	----	MT-2	> 100.00	----	9/ 8/88
AVS-4451	CPE	HIV	----	----	MT-2	88.30	----	9/ 8/88
AVS-4452	CPE	HIV	----	----	MT-2	10.50	----	9/ 8/88
AVS-4453	CPE	HIV	----	----	MT-2	14.30	----	11/30/88
AVS-4454	CPE	HIV	----	----	MT-2	6.94	----	11/30/88
AVS-4455	CPE	HIV	----	----	MT-2	92.30	----	11/30/88
AVS-4456	CPE	HIV	----	----	MT-2	16.20	----	11/30/88
AVS-4457	CPE	HIV	----	----	MT-2	71.30	----	11/30/88
AVS-4458	CPE	HIV	----	----	MT-2	8.06	----	11/30/88
AVS-4459	CPE	HIV	----	----	MT-2	> 100.00	----	11/30/88
AVS-4460	CPE	HIV	----	----	MT-2	7.90	----	11/30/88
AVS-4461	CPE	HIV	----	----	MT-2	47.10	----	11/30/88
AVS-4462	CPE	HIV	----	----	MT-2	60.10	----	11/30/88
AVS-4463	CPE	HIV	----	----	MT-2	25.20	----	11/30/88
AVS-4464	CPE	HIV	----	----	MT-2	< 0.32	----	11/30/88
AVS-4465	CPE	HIV	----	----	MT-2	> 100.00	----	11/30/88
AVS-4466	CPE	HIV	----	----	MT-2	6.71	----	11/30/88
AVS-4468	CPE	HIV	----	----	MT-2	> 100.00	----	11/30/88
AVS-4469	CPE	HIV	----	----	MT-2	> 100.00	----	11/30/88
AVS-4470	CPE	HIV	----	----	MT-2	5.18	----	11/30/88
AVS-4471	CPE	HIV	----	----	MT-2	6.94	----	11/30/88
AVS-4472	CPE	HIV	----	----	MT-2	> 100.00	----	11/30/88
AVS-4473	CPE	HIV	----	----	MT-2	> 100.00	----	11/30/88
AVS-4474	CPE	HIV	----	----	MT-2	> 100.00	----	11/30/88
AVS-4475	CPE	HIV	----	----	MT-2	> 100.00	----	11/30/88
AVS-4476	CPE	HIV	----	----	MT-2	> 100.00	----	11/30/88
AVS-4477	CPE	HIV	----	----	MT-2	11.40	----	11/30/88
AVS-4478	CPE	HIV	----	----	MT-2	70.60	----	11/30/88

**SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88**

COMPOUND	PROTOCOL	VIRUS	VR	ID50	CELL	NTC50	T1	DATE
AVS-4479	CPE	HIV	----	----	MT-2	49.10	----	11/30/88
AVS-4480	CPE	HIV	----	----	MT-2	> 100.00	----	11/30/88
AVS-4481	CPE	HIV	----	----	MT-2	0.81	----	11/30/88
AVS-4482	CPE	HIV	----	----	MT-2	14.80	----	11/30/88
AVS-4483	CPE	HIV	----	----	MT-2	23.80	----	11/30/88
AVS-4484	CPE	HIV	----	----	MT-2	6.96	----	11/30/88
AVS-4485	CPE	HIV	----	----	MT-2	> 100.00	----	11/30/88
AVS-4486	CPE	HIV	----	----	MT-2	40.90	----	11/30/88
AVS-4487	CPE	HIV	----	----	MT-2	> 100.00	----	11/30/88
AVS-4488	CPE	HIV	----	----	MT-2	2.04	----	11/30/88
AVS-4489	CPE	HIV	----	----	MT-2	0.43	----	11/30/88
AVS-4490	CPE	HIV	----	----	MT-2	6.23	----	11/30/88
AVS-4491	CPE	HIV	----	----	MT-2	7.30	----	11/30/88
AVS-4492	CPE	HIV	----	----	MT-2	1.19	----	12/ 7/88
AVS-4493	CPE	HIV	----	----	MT-2	9.32	----	12/ 7/88
AVS-4494	CPE	HIV	----	----	MT-2	12.50	----	12/ 7/88
AVS-4495	CPE	HIV	----	----	MT-2	1.66	----	12/ 7/88
AVS-4496	CPE	HIV	----	----	MT-2	23.30	----	12/ 7/88
AVS-4497	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 7/88
AVS-4498	CPE	HIV	----	----	MT-2	1.41	----	12/ 7/88
AVS-4499	CPE	HIV	----	----	MT-2	0.66	----	12/ 7/88
AVS-4500	CPE	HIV	----	----	MT-2	12.20	----	12/ 7/88
AVS-4501	CPE	HIV	----	----	MT-2	< 0.32	----	12/ 7/88
AVS-4502	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 7/88
AVS-4503	CPE	HIV	----	----	MT-2	70.50	----	12/ 7/88
AVS-4504	CPE	HIV	----	----	MT-2	14.40	----	12/ 7/88
AVS-4505	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 7/88
AVS-4506	CPE	HIV	----	----	MT-2	100.00	----	12/ 7/88
AVS-4507	CPE	HIV	----	----	MT-2	< 0.32	----	12/ 7/88
AVS-4508	CPE	HIV	----	----	MT-2	22.70	----	12/ 7/88
AVS-4509	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 7/88
AVS-4510	CPE	HIV	----	----	MT-2	19.40	----	12/ 7/88
AVS-4511	CPE	HIV	----	----	MT-2	48.80	----	12/ 28/88
AVS-4512	CPE	HIV	----	----	MT-2	< 0.32	----	12/ 7/88
AVS-4513	CPE	HIV	----	----	MT-2	5.69	----	12/ 7/88
AVS-4514	CPE	HIV	----	----	MT-2	< 0.32	----	12/ 7/88
AVS-4515	CPE	HIV	----	----	MT-2	46.90	----	12/ 7/88
AVS-4516	CPE	HIV	----	----	MT-2	2.13	----	12/ 7/88
AVS-4517	CPE	HIV	----	----	MT-2	< 0.32	----	12/ 7/88
AVS-4518	CPE	HIV	----	----	MT-2	26.20	----	12/ 7/88
AVS-4519	CPE	HIV	----	----	MT-2	50.00	----	12/ 7/88
AVS-4520	CPE	HIV	----	----	MT-2	60.70	----	12/ 7/88
AVS-4521	CPE	HIV	----	----	MT-2	10.00	----	12/ 7/88
AVS-4522	CPE	HIV	----	----	MT-2	19.90	----	12/ 7/88
AVS-4523	CPE	HIV	----	----	MT-2	53.90	----	12/ 7/88
AVS-4524	CPE	HIV	----	----	MT-2	21.30	----	12/ 7/88
AVS-4525	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 7/88
AVS-4526	CPE	HIV	----	----	MT-2	> 100.00	----	8/16/88
AVS-4527	CPE	HIV	----	----	MT-2	> 100.00	----	8/16/88
AVS-4528	CPE	HIV	----	----	MT-2	> 100.00	----	8/16/88

**SUMMARY OF AIDS TESTING  
FOR PERIOD OF 1/1/88 TO 12/31/88**

COMPOUND	PROTOCOL	VIRUS	VR	ID50	CELL	RT50	T1	DATE
AVS-4530	CPE	HIV	----	----	MT-2	5.05	----	8/16/88
AVS-4594	CPE	HIV	----	----	MT-2	5.79	----	11/17/88
AVS-4594	CPE	HIV	----	----	MT-2	5.26	----	11/30/88
AVS-4595	CPE	HIV	----	----	MT-2	> 100.00	----	11/17/88
AVS-4596	CPE	HIV	----	----	MT-2	> 100.00	----	11/17/88
AVS-4597	CPE	HIV	----	----	MT-2	> 100.00	----	11/17/88
AVS-4599	CPE	HIV	----	----	MT-2	< 0.32	----	11/ 9/88
AVS-4599	CPE	HIV	----	----	MT-2	> 10.00	----	11/22/88
AVS-4610	CPE	HIV	2.68	MT-2	> 100.00	> 37.30	9/29/88	
AVS-4611	CPE	HIV	3.04	MT-2	> 100.00	> 32.90	9/29/88	
AVS-4629	CPE	HIV	----	----	MT-2	< 0.32	----	11/ 9/88
AVS-4629	CPE	HIV	----	----	MT-2	> 3.20	----	11/22/88
AVS-4630	CPE	HIV	----	----	MT-2	< 0.32	----	11/ 9/88
AVS-4630	CPE	HIV	----	----	MT-2	> 3.20	----	11/22/88
AVS-4631	CPE	HIV	----	----	MT-2	< 0.32	----	11/ 9/88
AVS-4631	CPE	HIV	----	----	MT-2	> 3.20	----	11/22/88
AVS-5010	CPE	HIV	----	----	MT-2	< 0.32	----	11/ 9/88
AVS-5011	CPE	HIV	----	----	MT-2	< 0.32	----	11/ 9/88
AVS-5012	CPE	HIV	----	----	MT-2	14.66	----	11/ 9/88
AVS-5013	CPE	HIV	----	----	MT-2	> 100.00	----	11/ 9/88
AVS-5014	CPE	HIV	----	----	MT-2	> 100.00	----	11/ 9/88
AVS-5015	CPE	HIV	----	----	MT-2	> 100.00	----	11/ 9/88
AVS-5016	CPE	HIV	----	----	MT-2	> 100.00	----	11/ 9/88
AVS-5017	CPE	HIV	----	----	MT-2	> 100.00	----	11/ 9/88
AVS-5018	CPE	HIV	----	----	MT-2	> 100.00	----	11/ 9/88
AVS-5019	CPE	HIV	----	----	MT-2	> 100.00	----	11/ 9/88
AVS-5020	CPE	HIV	----	----	MT-2	> 100.00	----	11/ 9/88
AVS-5021	CPE	HIV	----	----	MT-2	> 100.00	----	11/ 9/88
AVS-5022	CPE	HIV	----	----	MT-2	> 100.00	----	11/ 9/88
AVS-5023	CPE	HIV	----	----	MT-2	> 100.00	----	11/ 9/88
AVS-5026	CPE	HIV	47.90	MT-2	> 100.00	> 1.57	11/ 9/88	
AVS-5026	CPE	HIV	21.50	MT-2	55.70	2.59	11/22/88	
AVS-5027	CPE	HIV	----	----	MT-2	6.17	----	11/ 9/88
AVS-5040	CPE	HIV	----	----	MT-2	70.40	----	12/ 9/88
AVS-5041	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 9/88
AVS-5042	CPE	HIV	----	----	MT-2	> 100.00	----	12/ 9/88
AVS-5043	CPE	HIV	----	----	MT-2	51.80	----	9/23/88
AVS-5043	CPE	HIV	----	----	MT-2	5.01	----	11/ 9/88
AVS-5048	CPE	HIV	----	----	MT-2	> 100.00	----	11/22/88
AVS-5073	CPE	HIV	----	----	MT-2	> 100.00	----	11/30/88
AVS-5074	CPE	HIV	----	----	MT-2	> 100.00	----	11/30/88
AVS-5535	CPE	HIV	----	----	MT-2	> 100.00	----	4/ 6/88
AVS-5536	CPE	HIV	----	----	MT-2	> 100.00	----	4/ 6/88
AVS-7232	CPE	HIV	----	----	MT-2	55.30	----	11/ 9/88

**APPENDIX A**

**Part II - Summary of AIDS Testing for  
Period of 1/1/89 to 4/30/91**

CUMULATIVE SUMMARY of AIDS Testing with AVS Compounds  
January 1, 1989 - April 30, 1991

AVS No.	Ship-ment	Plt Cell Line	Test Date	Diff-mill.	TC 50	TC 25	SI	TAI
0001 52		069 MT2	08/01/89	1.238	0.00	8.06	0.00 >	3.74
0002 46		06F MT2	08/08/89	1.242	0.00	35.20	0.00	5.85
0043 53		0MT MT2	05/24/89	1.329	0.00	2.90	0.00	0.00
0094 68		1T1 CEM	07/17/90	1.330	0.00 >	100.00	0.00	1.65
0094 68		1XJ CEM	08/01/90	0.912	0.00	40.70	0.00 >	3.81
0094 65		1JR MT2	04/12/90	1.104	0.00 >	100.00	0.00 >	6.82
0095 53		0NT AT2	05/24/89	1.329	0.00	10.80	0.00	0.82
0095 46		06F MT2	08/08/89	1.242	0.00	56.00	0.00	0.75
0124 69		125 MT2	08/09/90	1.136	0.00 >	100.00	0.00 >	3.90
0141 53		0HU MT2	05/24/89	1.385	0.00 <	0.32	0.00	0.00
0141 53		101 MT2	10/25/89	1.360	0.00	0.01	0.00 >	0.01
0143 65		1JR MT2	04/12/90	1.104	0.00 >	100.00	0.00	0.00
0148 67		2SA MT2	08/07/90	1.163	0.00 <	0.32	0.00	0.00
0148 67		106 MT2	07/24/90	1.298	0.00 <	0.32	0.00	0.00
0217 61		10A MT2	10/31/89	1.473	0.00 >	100.00	0.00 >	7.41
1223 53		04M MT2	05/24/89	1.385	0.00 >	100.00	0.00 >	0.89
0275 46		06G MT2	08/04/89	1.254	0.00 >	100.00	0.00 >	0.79
0253 52		069 MT2	03/01/89	1.238	0.00	0.55	0.00	0.00
0284 32		04J MT2	12/21/88	1.054	0.00 <	0.32	0.00	0.00
0343 46		06G MT2	08/04/89	1.254	0.00	0.62	0.00	0.00
0343 42		172 MT2	01/24/90	1.207	0.00	1.78	0.00	0.00
0581 68		1XJ CEM	08/01/90	0.912	26.30	48.50	1.85	8.86
0581 65		11B MT2	04/12/90	1.117	17.60	15.60	0.99	1.49
0584 68		1XX CEM	08/01/90	1.052	0.00 >	100.00	0.00 >	19.50
0584 65		11B MT2	04/12/90	1.117	0.00 >	100.00	0.00 >	0.31
0599 61		1T1 CEM	07/17/90	1.330	0.00 >	100.00	0.00 >	4.66
0599 68		1XK CEM	08/01/90	1.052	0.00 >	100.00	0.00 >	27.70
0599 61		1G0 MT2	10/31/89	1.394	0.00 >	100.00	0.00 >	1.67
0599 65		1T1 MT2	04/12/90	1.124	0.00 >	100.00	0.00 >	3.56
0600 65		1R8 CEM	07/05/90	1.134	0.00	77.30	0.00	1.41
0600 65		1UV CEM	07/19/90	0.649	0.00 >	100.00	0.00 >	3.96
0600 65		1T1 MT2	04/12/90	1.124	0.00 >	100.00	0.00 >	1.90
0646 67		106 MT2	07/24/90	1.298	0.00	1.90	0.00 >	1.66
0697 68		4CM CEM	02/20/91	0.787	0.00 >	100.00	0.00	0.43
0697 65		1IU MT2	04/12/90	1.102	0.00 >	100.00	0.00	0.00
0697 68		4CC MT2	02/20/91	1.443	0.00 >	100.00	0.00	0.00
0698 68		1XH CEM	08/01/90	1.007	72.20	100.00 >	1.38 >	27.57
0698 65		1IU MT2	04/12/90	1.102	0.00 >	100.00	0.00	0.00
0700 68		1XH CEM	08/01/90	1.007	0.00	69.80	0.00 >	24.73
0700 65		1IV MT2	04/12/90	1.130	78.40	53.50	0.68	0.47
0702 65		1R8 CEM	07/05/90	1.134	4.28	100.00 >	13.36 >	53.89
0702 73		58H CEM	12/06/90	0.627	6.43	100.00 >	22.56 >	53.09
0702 73		3HD CEM	01/04/91	1.376	51.70	100.00 >	19.34 >	51.31
0702 68		4CN CEM	02/20/91	0.787	20.10	0.32	0.02 >	26.25
0702 65		1IV MT2	04/12/90	1.130	0.00 >	100.00	0.00 >	0.05
0702 73		384 MT2	12/06/90	0.728	16.50	100.00 >	6.07 >	22.73
0702 68		4CC MT2	02/20/91	1.443	17.30	100.00 >	5.77 >	32.24
0703 75		38H CEM	12/06/90	0.627	2.05	0.28	0.13	45.29
0703 73		34D CEM	01/04/91	1.376	19.60	45.20	2.31 >	56.77
0703 73		384 MT2	12/06/90	0.728	2.32	100.00 >	43.05 >	49.45
0708 61		10B MT2	10/31/89	1.394	0.00	14.00	0.00	1.32
0708 65		1JF MT2	04/18/90	1.187	0.00	34.70	0.00	1.35
0709 65		1RT CEM	07/05/90	1.211	20.40	100.00 >	4.20 >	22.97
0709 64		4CJ CEM	02/20/91	0.715	22.60	100.00 >	4.63 >	27.53
0709 30		01B MT2	11/22/88	1.770	0.00	84.00	0.00 >	11.13
0709 65		1JF MT2	04/18/90	1.167	0.03	100.00	0.00	1.70
0709 68		4CB MT2	02/20/91	1.444	13.70	100.00 >	7.29 >	33.98
0710 68		1XO CEM	08/01/90	0.902	21.70	55.00	2.33 >	18.62
0710 65		1JG MT2	04/18/90	1.068	0.00	14.90	0.00	1.85
0712 68		1XO CEM	08/01/90	0.902	4.84	100.00 >	14.62 >	41.91
0712 65		1JG MT2	04/18/90	1.068	0.00 >	100.00	0.00 >	0.20
0714 65		1TJ CEM	07/17/90	1.336	0.00 >	100.00	0.00 >	10.50
0714 68		1XP CEM	08/01/90	0.968	44.50	100.00 >	2.24 >	32.13
0714 65		1JX MT2	04/18/90	1.005	0.00	50.20	0.00 >	0.55
0801 68		1TG MT2	07/31/90	1.056	0.00 <	0.32	0.00	0.00
0919 52		21K MT2	08/16/90	1.321	0.00 >	1.00	0.00 >	1.10
1005 64		1XH MT2	04/10/90	0.991	0.00	15.50	0.00	0.00
1009 64		1XH MT2	04/10/90	0.991	0.00	1.52	0.00	0.00
1017 64		1JV CEM	04/25/90	0.554	14.10	100.00 >	7.10 >	43.52
1017 64		1RT CEM	07/05/90	1.211	0.00	100.00	0.00	9.35
1017 64		1HY MT2	04/10/90	1.060	0.00	100.00	0.00	0.03
1028 64		1JV CEM	04/25/90	0.554	0.00	100.00	0.00 >	33.91
1028 64		1XP CEM	08/01/90	0.968	0.00	60.70	0.00	4.92
1028 64		1HY MT2	04/10/90	1.060	0.00	100.00	0.00 >	0.55
1116 43		039 MT2	12/01/88	2.072	0.00	100.00	0.00 >	7.71

## Cumulative Summary (cont'd)

AVN	Ship- ment	Pkt	Cell	Test Date	Diff: mtl.	16 50	16 25	\$1	TAI
1117	45	039	MT2	12/01/88	2.072	0.00	> 100.00	0.00	0.88
1159	52	08A	MT2	08/01/89	1.248	0.00	> 36.80	0.00	0.00
1176	44	08H	MT2	08/08/89	1.206	0.00	> 100.00	0.00	0.70
1210	61	10C	MT2	10/31/89	1.376	0.00	> 53.80	0.00	1.83
1214	52	08B	MT2	08/01/89	1.219	0.00	> 2.76	0.00	0.00
1215	53	08V	MT2	05/24/89	1.308	0.00	> 10.00	0.00	0.69
1217	32	08B	MT2	08/01/89	1.219	0.00	> 49.20	0.00	0.60
1297	64	1K9	CEM	04/26/90	0.647	0.00	> 100.00	0.00	> 13.01
1297	64	1K2	MT2	06/10/90	0.841	0.00	> 100.00	0.00	4.61
1307	67	107	MT2	07/24/90	1.252	0.00	> 18.30	0.00	> 1.20
1308	67	208	CEM	08/07/90	1.178	0.00	> 87.00	0.00	1.45
1308	67	107	MT2	07/24/90	1.252	0.00	> 100.00	0.00	> 0.30
1315	67	4C0	CEM	02/20/91	0.715	0.00	> 96.40	0.00	> 7.06
1315	67	4C0	MT2	02/20/91	1.446	10.00	> 100.00	> 10.00	> 31.19
1337	64	1KU	CEM	07/05/90	1.144	0.00	> 49.00	0.00	> 3.40
1337	58	1K9	CEM	08/01/90	1.038	0.00	> 23.20	0.00	> 1.23
1337	65	14W	MT2	04/18/90	1.005	0.00	> 51.30	0.00	> 1.10
1355	64	1K9	CEM	04/26/90	0.647	0.00	> 100.00	0.00	> 12.90
1355	64	1K2	MT2	04/10/90	0.841	0.00	> 74.50	0.00	> 7.42
1354	64	1TJ	CEM	07/17/90	1.334	0.00	< 0.32	0.00	0.00
1356	64	11D	MT2	04/10/90	1.034	0.00	< 0.32	0.00	0.00
1356	64	14R	MT2	04/26/90	1.048	0.00	< 0.36	0.00	> 1.86
1371	45	03A	MT2	12/01/88	1.982	0.00	> 100.00	0.00	0.00
1372	45	03A	MT2	12/01/88	1.982	0.00	> 22.80	0.00	0.00
1381	45	03B	MT2	12/01/88	2.017	0.00	> 53.30	0.00	0.77
1603	140	CEM	12/07/89	0.827	<	0.03	> 10.00	> 312.50	> 74.18
1603	1C3	CEM	02/22/90	0.580	<	0.03	> 10.00	> 312.50	> 64.11
1603	1DL	CEM	03/02/90	0.696	0.00	> 10.00	> 0.00	> 22.40	
1603	1FM	CEM	03/20/90	1.335	0.00	> 0.10	> 0.00	> 13.90	
1603	1FM	CEM	03/20/90	1.315	0.00	> 0.10	> 0.00	> 14.20	
1603	1G5	CEM	03/21/90	1.478	<	0.03	> 10.00	> 312.50	> 86.01
1603	1KX	CEM	04/01/90	0.949	<	0.03	> 10.00	> 312.50	> 82.82
1603	1KX	CEM	04/12/90	0.611	<	0.03	> 10.00	> 312.50	> 93.30
1603	1JC	CEM	04/18/90	0.969	<	0.03	> 10.00	> 312.50	> 78.90
1603	1KB	CEM	04/26/90	0.700	<	0.03	> 10.00	> 312.50	> 88.88
1603	1KI	CEM	05/10/90	1.414	<	0.03	> 10.00	> 312.50	> 74.00
1603	1MR	CEM	05/16/90	1.386	<	0.03	> 10.00	> 312.50	> 64.82
1603	1R6	CEM	06/12/90	1.057	<	0.03	> 10.00	> 312.50	> 63.73
1603	1RU	CEM	06/26/90	1.455	0.09	> 10.00	> 106.02	> 75.95	
1603	1RP	CEM	07/05/90	1.044	<	0.03	> 10.00	> 312.50	> 91.50
1603	1TR	CEM	07/17/90	1.414	0.01	> 1.00	> 111.03	> 32.00	
1603	1UU	CEM	07/19/90	0.723	0.0004	> 1.00	> 2682.7	> 58.00	
1603	1YL	CEM	07/24/90	0.840	0.002	> 1.00	> 477.06	> 46.70	
1603	1XI	CEM	08/01/90	0.880	0.02	> 1.00	> 53.32	> 35.60	
1603	1YQ	CEM	08/02/90	0.778	0.002	> 1.00	> 353.22	> 51.70	
1603	21X	CEM	08/14/90	0.826	0.01	> 1.00	> 127.11	> 42.90	
1603	22M	CEM	08/15/90	1.045	0.01	> 1.00	> 86.60	> 34.40	
1603	239	CEM	08/16/90	0.800	0.003	> 1.00	> 330.55	> 49.50	
1603	248	CEM	08/21/90	0.696	0.002	> 1.00	> 446.68	> 49.75	
1603	24J	CEM	08/29/90	0.771	0.01	> 1.00	> 133.35	> 33.47	
1603	28T	CEM	09/04/90	0.933	0.003	> 1.00	> 332.46	> 67.10	
1603	29E	CEM	09/05/90	1.300	0.0004	> 1.00	> 1676.8	> 50.50	
1603	27J	CEM	09/06/90	0.838	0.01	> 1.00	> 146.78	> 23.60	
1603	2AU	CEM	09/11/90	0.889	0.01	> 1.00	> 167.88	> 41.60	
1603	2B9	CEM	09/25/90	0.746	<	0.03	> 5.67	> 177.27	> 72.67
1603	2E2	CEM	09/27/90	0.868	<	0.03	> 2.35	> 73.56	> 63.87
1603	2M4	CEM	10/02/90	0.672	<	0.00	> 1.00	> 0.00	> 86.30
1603	2II	CEM	10/03/90	0.377	<	0.00	> 1.00	> 0.00	> 100.00
1603	2K1	CEM	10/05/90	0.701	0.00	> 0.80	> 0.00	> 0.00	> 81.80
1603	107	CEM	10/17/90	2.01	>	0.027	> 0.00057	> 47.12	> 54.49
1603	2VA	CEM	10/30/90	0.955	0.002	> 1.00	> 425.46	> 65.80	
1603	208	CEM	10/31/90	1.168	0.13	> 0.15	> 6.71	> 16.69	
1603	2Z1	CEM	11/01/90	1.207	0.002	> 1.00	> 410.67	> 68.61	
1603	31P	CEM	11/02/90	0.937	0.0008	> 1.00	> 1654.8	> 52.83	
1603	28E	CEM	11/06/90	0.776	0.003	> 1.00	> 367.74	> 50.48	
1603	2Z3	CEM	11/07/90	1.074	0.002	> 1.00	> 489.39	> 69.60	
1603	312	CEM	11/08/90	1.641	0.001	> 1.00	> 715.61	> 59.40	
1603	320	CEM	11/09/90	1.311	0.001	> 1.00	> 954.55	> 69.98	
1603	340	CEM	11/13/90	0.902	0.004	> 1.00	> 261.12	> 38.26	
1603	351	CEM	11/14/90	0.581	0.0003	> 1.00	> 3344.6	> 66.30	
1603	34M	CEM	11/20/90	0.751	0.0006	> 0.00007	> 0.01	> 61.85	
1603	370	CEM	11/21/90	0.720	0.0009	> 1.00	> 1055.0	> 62.00	
1603	38A	CEM	11/27/90	1.146	0.002	> 1.00	> 444.30	> 45.03	
1603	39E	CEM	11/29/90	1.490	0.001	> 1.00	> 811.63	> 56.60	
1603	3AA	CEM	11/30/90	1.369	0.002	> 0.69	> 297.03	> 36.51	
1603	38M	CEM	12/04/90	0.641	0.0002	> 1.00	> 5914.7	> 75.60	
1603	3C8	CEM	12/11/90	0.910	0.0004	> 1.00	> 2558.0	> 60.80	
1603	30T	CEM	12/12/90	1.286	0.0009	> 1.00	> 1094.5	> 51.90	

## Cumulative Summary (cont'd)

AVS No.	Skip- ment	Pkt Cell # Line	Test Date	Diff- mili.	TC 50	TC 25	SI	TAT
1603		308 CEN	12/13/90	1.299	0.0007 >	1.00 > 1514.7 >	48.39	
1603		309 CEN	12/20/90	1.182	0.001 >	1.00 > 878.32 >	58.40	
1603		310 CEN	01/04/91	1.328	0.0005 >	1.00 > 1989.3 >	56.60	
1603		316 CEN	01/06/91	0.725 <	0.00 >	1.00 > 0.00 >	68.70	
1603		318 CEN	01/09/91	0.801	0.001 >	1.00 > 681.29 >	49.75	
1603		317 CEN	01/11/91	0.645	0.0002 >	1.00 > 5436.2 >	76.20	
1603		319 CEN	01/17/91	0.600	0.01 >	1.00 > 164.56 >	38.79	
1603		319F CEN	01/18/91	0.958	0.0005 >	1.00 > 1975.9 >	53.87	
1603		320 CEN	01/21/91	0.681	0.0002 >	1.00 > 6309.6 >	73.00	
1603		421 CEN	01/22/91	0.758	0.0008 >	1.00 > 1186.0 >	58.27	
1603		439 CEN	01/22/91	0.762	0.0006 >	1.00 > 1747.3 >	55.16	
1603		413 CEN	01/23/91	0.970	0.0004 >	1.00 > 2238.7 >	67.25	
1603		437 CEN	01/23/91	1.143	0.0008 >	1.00 > 1279.8 >	58.40	
1603		468 CEN	01/24/91	0.886	0.0005 >	1.00 > 2118.8 >	45.50	
1603		340 CEN	01/24/91	0.888	0.0005 >	1.00 > 2118.8 >	45.50	
1603		370 CEN	01/25/91	1.368	0.002 >	1.00 > 609.49 >	41.09	
1603		471 CEN	01/29/91	0.813	0.00 >	1.00 > 0.00 >	43.40	
1603		481 CEN	01/31/91	0.962	0.0001 >	1.00 > 6918.3 >	59.40	
1603		498 CEN	02/05/91	1.258	0.002 >	1.00 > 538.21 >	48.98	
1603		441 CEN	02/06/91	0.968	0.0003 >	1.00 > 3074.7 >	65.04	
1603		501 CEN	02/20/91	0.758	0.0007 >	1.00 > 1420.8 >	48.46	
1603		507 CEN	02/21/91	0.392	0.001 >	1.00 > 730.89 >	42.46	
1603		509 CEN	02/22/91	0.515	0.0001 >	1.00 > 8349.7 >	62.53	
1603		510 MT2	11/22/88	1.522 <	0.03 >	10.00 > 313.00 >	84.53	
1603		521 MT2	11/22/88	1.758 <	0.03 >	10.00 > 313.00 >	96.64	
1603		529 MT2	11/22/88	1.722 <	0.03 >	10.00 > 313.00 >	66.94	
1603		539 MT2	11/29/88	1.823 <	0.03 >	4.02 > 126.00 >	72.55	
1603		527 MT2	11/29/88	1.279	0.03 >	6.92 > 212.00 >	76.79	
1603		538 MT2	12/01/88	1.577 <	0.03 >	10.00 > 313.00 >	71.32	
1603		534 MT2	12/01/88	1.827 <	0.03 >	10.00 > 313.00 >	82.24	
1603		542 MT2	12/21/88	1.101	0.11 >	10.00 > 93.80 >	77.17	
1603		543 MT2	12/21/88	1.012	0.17 >	10.00 > 57.30 >	72.82	
1603		547 MT2	01/16/89	0.610	0.06 >	10.00 > 224.00 >	86.85	
1603		550 MT2	02/01/89	0.961 <	0.03 >	10.00 > 313.00 >	93.21	
1603		558 MT2	02/07/89	0.777	0.03 >	1.87 > 56.90 >	40.86	
1603		562 MT2	02/14/89	0.479 <	0.03 >	6.98 > 218.00 >	75.54	
1603		578 MT2	02/15/89	0.816 <	0.03 >	6.21 > 216.00 >	79.59	
1603		589 MT2	02/23/89	1.072 <	0.03 >	10.00 > 313.00 >	91.02	
1603		591 MT2	03/16/89	1.252	0.23 >	7.59 > 52.90 >	51.28	
1603		581 MT2	03/28/89	1.530	0.13 >	10.00 > 77.20 >	68.53	
1603		587 MT2	03/28/89	1.427	0.05 >	10.00 > 210.00 >	78.07	
1603		545 MT2	03/29/89	1.412	0.17 >	10.00 > 59.40 >	65.06	
1603		546 MT2	03/29/89	1.207	0.46 >	10.00 > 21.80 >	52.35	
1603		548 MT2	03/30/89	1.173	0.21 >	10.00 > 48.50 >	67.16	
1603		588 MT2	04/04/89	1.313	0.14 >	10.00 > 72.00 >	77.44	
1603		580 MT2	04/04/89	1.372	0.68 >	10.00 > 14.80 >	34.42	
1603		508 MT2	04/11/89	1.798	0.16 >	10.00 > 61.40 >	62.71	
1603		5FC MT2	05/09/89	0.998	0.54 >	10.00 > 18.50 >	51.26	
1603		543 MT2	05/09/89	1.087	0.51 >	10.00 > 19.40 >	47.42	
1603		540 MT2	05/09/89	1.235	0.59 >	8.30 > 14.20 >	35.71	
1603		541 MT2	05/10/89	0.912	0.28 >	9.43 > 34.30 >	53.71	
1603		562 MT2	05/10/89	1.175	0.17 >	10.00 > 58.30 >	68.33	
1603		500 MT2	05/11/89	1.603	0.06 >	10.00 > 168.00 >	82.95	
1603		5FV MT2	05/11/89	1.268	0.06 >	10.00 > 154.00 >	85.75	
1603		528 MT2	05/15/89	1.347	0.11 >	10.00 > 92.00 >	78.84	
1603		5M1 MT2	05/16/89	1.135	0.14 >	10.00 > 70.10 >	76.25	
1603		545 MT2	05/16/89	1.136	0.14 >	10.00 > 70.90 >	76.35	
1603		567 MT2	05/17/89	1.274	0.58 >	10.00 > 17.30 >	66.51	
1603		562 MT2	05/17/89	1.317	0.57 >	10.00 > 17.50 >	67.11	
1603		514 MT2	05/17/89	1.029	0.38 >	10.00 > 24.10 >	57.51	
1603		518 MT2	05/22/89	1.222	0.08 >	10.00 > 123.00 >	79.94	
1603		510 MT2	05/22/89	1.149	0.07 >	10.00 > 158.00 >	83.24	
1603		549 MT2	05/23/89	1.065	0.24 >	10.00 > 61.80 >	67.14	
1603		542 MT2	05/23/89	1.107	0.52 >	10.00 > 19.11 >	67.92	
1603		54K MT2	05/24/89	1.345	0.14 >	10.00 > 70.50 >	64.95	
1603		548 MT2	05/24/89	1.423	0.13 >	10.00 > 75.30 >	68.54	
1603		511 MT2	05/24/89	1.528	0.16 >	10.00 > 64.20 >	64.45	
1603		560 MT2	06/20/89	1.186	0.16 >	10.00 > 63.28 >	71.12	
1603		5LC MT2	06/20/89	1.150	0.07 >	10.00 > 134.27 >	73.65	
1603		5L9 MT2	06/20/89	1.091	0.07 >	10.00 > 144.33 >	76.35	
1603		5L8 MT2	06/20/89	1.094	0.07 >	10.00 > 144.33 >	75.35	
1603		5LV MT2	06/21/89	1.151	0.11 >	2.15 > 19.26 >	67.48	
1603		5L6 MT2	06/22/89	1.448	0.12 >	10.00 > 87.07 >	77.24	
1603		5M6 MT2	06/27/89	1.169	0.12 >	10.00 > 81.08 >	79.74	
1603		5MC MT2	06/28/89	1.277	0.12 >	10.00 > 89.76 >	72.13	
1603		5MM MT2	06/28/89	1.183	0.12 >	10.00 > 83.02 >	76.24	
1603		5MK MT2	07/05/89	1.520	0.30 >	10.00 > 32.81 >	62.72	
1603		5L3 MT2	07/05/89	1.489	0.33 >	10.00 > 30.78 >	59.92	

## Cumulative Summary (cont'd)

AVB No.	Ship- ment	Pit Cell # Line	Test Date	Diff- mcl.	TC 50	TC 25	S1	TAL
1603	OPE	MT2	07/10/89	1.568	0.14 >	10.00 >	72.84 >	70.92
1603	OMJ	MT2	07/10/89	1.105	0.15 >	10.00 >	66.33 >	76.13
1603	001	MT2	07/19/89	0.892	0.10 >	10.00 >	96.22 >	78.05
1603	007	MT2	07/20/89	1.235	0.12 >	10.00 >	80.95 >	73.33
1603	008	MT2	07/25/89	0.760	0.07 >	10.00 >	137.23 >	86.63
1603	009	MT2	07/25/89	1.016	0.15 >	10.00 >	65.70 >	76.33
1603	010	MT2	07/25/89	0.954	0.20 >	10.00 >	49.02 >	70.72
1603	10Y	MT2	07/26/89	0.910	0.07 >	10.00 >	139.42 >	75.89
1603	JP7	MT2	07/26/89	1.168	0.17 >	10.00 >	59.14 >	65.54
1603	OMD	MT2	07/26/89	1.152	0.17 >	10.00 >	59.14 >	57.38
1603	OP2	MT2	08/01/89	1.166	0.13 >	10.00 >	79.84 >	77.54
1603	10Z	MT2	08/01/89	1.175	0.13 >	10.00 >	72.56 >	71.73
1603	015	MT2	08/01/89	1.165	0.14 >	10.00 >	72.59 >	71.53
1603	001	MT2	08/01/89	1.204	0.08 >	7.45 >	95.97 >	79.37
1603	001	MT2	08/03/89	1.030	0.14 >	10.00 >	71.03 >	75.23
1603	001	MT2	08/03/89	1.047	0.14 >	10.00 >	71.41 >	70.63
1603	008	MT2	08/08/89	1.192	0.06 >	6.90 >	119.81 >	80.58
1603	010	MT2	08/08/89	1.267	0.03 >	10.00 >	312.50 >	87.23
1603	016	MT2	08/08/89	1.227	< 0.03 >	10.00 >	312.50 >	83.13
1603	148	MT2	08/08/89	1.655	0.12 >	10.00 >	86.15 >	76.32
1603	01C	MT2	08/08/89	1.607	0.11 >	10.00 >	91.84 >	75.22
1603	01C	MT2	08/08/89	1.665	0.05 >	10.00 >	198.11 >	78.42
1603	01E	MT2	08/08/89	1.505	1.76 >	30.40 >	17.28 >	58.70
1603	01F	MT2	03/09/89	1.644	0.05 >	10.00 >	200.08 >	74.32
1603	01G	MT2	08/09/89	1.500	0.05 >	10.00 >	191.77 >	70.84
1603	01H	MT2	08/09/89	1.205	0.05 >	10.00 >	205.37 >	77.85
1603	01H	MT2	08/09/89	1.094	0.05 >	10.00 >	207.09 >	81.65
1603	01Z	MT2	08/17/89	1.150	0.13 >	10.00 >	77.47 >	74.43
1603	020	MT2	08/17/89	1.343	0.09 >	10.00 >	115.31 >	66.54
1603	020	MT2	08/17/89	1.514	0.15 >	10.00 >	67.30 >	73.34
1603	020	MT2	08/17/89	1.389	< 0.32 >	53.00 >	165.59 >	82.68
1603	020	MT2	08/22/89	1.562	0.11 >	6.91 >	62.87 >	67.76
1603	020	MT2	08/23/89	0.973	0.07 >	10.00 >	135.90 >	84.06
1603	0T2	MT2	08/23/89	1.354	0.10 >	10.00 >	95.07 >	80.24
1603	0T1	MT2	08/23/89	1.343	0.07 >	6.98 >	106.54 >	78.88
1603	0TO	MT2	08/24/89	1.176	0.09 >	10.00 >	110.91 >	79.83
1603	0TY	MT2	08/24/89	1.157	0.14 >	10.00 >	70.89 >	77.62
1603	0LQ	MT2	08/24/89	0.959	0.12 >	10.00 >	85.18 >	77.13
1603	0UT	MT2	08/24/89	0.964	0.12 >	10.00 >	86.69 >	76.43
1603	0UT	MT2	08/24/89	1.312	0.04 >	3.20 >	76.07 >	60.23
1603	0VJ	MT2	08/30/89	1.255	0.09 >	10.00 >	34.09 >	59.62
1603	0VW	MT2	08/30/89	1.237	0.29 >	10.00 >	34.71 >	59.02
1603	0WQ	MT2	08/31/89	1.201	0.06 >	10.00 >	180.28 >	84.84
1603	0WE	MT2	09/07/89	1.712	0.17 >	10.00 >	60.12 >	72.14
1603	0WI	MT2	09/07/89	1.743	0.17 >	10.00 >	59.47 >	71.84
1603	0Y5	MT2	10/10/89	1.582	0.27 >	10.00 >	36.76 >	58.79
1603	0YH	MT2	10/11/89	1.068	0.21 >	10.00 >	48.58 >	69.42
1603	0YH	MT2	10/12/89	1.177	0.15 >	10.00 >	68.71 >	70.84
1603	0YT	MT2	10/12/89	1.407	0.21 >	10.00 >	48.29 >	66.21
1603	0YZ	MT2	10/12/89	1.380	0.17 >	10.00 >	58.20 >	66.91
1603	0Z3	MT2	10/12/89	1.279	0.15 >	10.00 >	65.00 >	72.22
1603	0Z9	MT2	10/17/89	1.278	0.16 >	10.00 >	62.05 >	73.73
1603	0ZC	MT2	10/17/89	1.202	0.15 >	10.00 >	67.86 >	75.33
1603	0ZV	MT2	10/25/89	1.423	0.16 >	10.00 >	54.74 >	73.43
1603	100	MT2	10/25/89	1.411	0.15 >	10.00 >	66.65 >	73.03
1603	104	MT2	10/26/89	1.275	0.10 >	10.00 >	102.96 >	69.10
1603	101	MT2	10/26/89	1.231	0.11 >	10.00 >	93.89 >	69.00
1603	020	MT2	10/31/89	1.458	0.41 >	10.00 >	26.37 >	57.51
1603	109	MT2	10/31/89	1.441	0.32 >	10.00 >	31.25 >	63.52
1603	10M	MT2	11/02/89	1.264	0.14 >	10.00 >	70.92 >	75.24
1603	111	MT2	11/02/89	1.322	1.55 >	10.00 >	6.44 >	28.73
1603	112	MT2	11/07/89	1.330	0.16 >	10.00 >	61.59 >	70.13
1603	114	MT2	11/07/89	1.329	0.16 >	10.00 >	61.59 >	70.92
1603	110	MT2	11/07/89	1.316	0.17 >	10.00 >	59.43 >	71.02
1603	11T	MT2	11/07/89	1.307	0.16 >	10.00 >	61.13 >	70.62
1603	128	MT2	11/08/89	0.908	0.06 >	10.00 >	156.06 >	86.16
1603	129	MT2	11/13/89	1.076	0.12 >	10.00 >	80.54 >	77.83
1603	130	MT2	11/21/89	1.408	0.11 >	10.00 >	38.59 >	78.72
1603	13E	MT2	11/28/89	1.576	0.14 >	10.00 >	72.55 >	66.33
1603	13E	MT2	11/30/89	1.347	0.09 >	10.00 >	106.18 >	54.54
1603	141	MT2	11/30/89	1.050	0.03 >	10.00 >	293.83 >	91.04
1603	14E	MT2	12/05/89	1.328	0.12 >	10.00 >	80.94 >	73.75
1603	14C	MT2	12/05/89	1.344	0.13 >	10.00 >	75.30 >	67.54
1603	149	MT2	12/05/89	1.383	0.13 >	10.00 >	74.77 >	67.05
1603	147	MT2	12/05/89	1.376	0.13 >	10.00 >	74.77 >	68.15
1603	14L	MT2	12/07/89	1.092	< 0.03 >	10.00 >	312.50 >	96.33
1603	148	MT2	12/14/89	1.353	0.11 >	10.00 >	90.18 >	80.04
1603	15E	MT2	12/20/89	1.309	0.06 >	10.00 >	160.24 >	62.94

**Cumulative Summary (cont'd)**

AVB No.	Ship- ment	Pkt Cell # Line	Test Date	Diffr. mtl.	TC 50	TC 25	SI	TAI
1603		153 MT2	12/20/90	1.358	0.07 >	10.00 >	143.31 >	71.72
1603		156 MT2	01/04/90	1.380	0.07 >	10.00 >	152.16 >	83.74
1603		157 MT2	01/17/90	1.106	0.05 >	10.00 >	190.61 >	86.15
1603		160 MT2	01/23/90	1.200	0.07 >	4.92	65.34 >	68.79
1603		167 MT2	01/23/90	1.192	0.05 >	5.74	116.95 >	76.33
1603		171 MT2	01/24/90	1.256	0.09 >	1.35	16.72 >	42.20
1603		160 MT2	01/24/90	1.313	0.07 >	1.35	22.44 >	45.51
1603		172 MT2	01/30/90	0.922	0.07 >	10.00 >	149.11 >	35.47
1603		181 MT2	01/30/90	1.186	0.04 >	5.01	126.62 >	73.31
1603		186 MT2	01/30/90	0.874	0.13 >	10.00 >	78.87 >	76.96
1603		170 MT2	01/31/90	1.206	0.07 >	10.00 >	147.80 >	82.75
1603		194 MT2	02/01/90	1.234	0.05 >	10.00 >	184.12 >	86.74
1603		180 MT2	02/01/90	1.269	0.08 >	10.00 >	127.94 >	81.44
1603		193 MT2	02/06/90	1.116	0.16 >	10.00 >	62.08 >	74.03
1603		18X MT2	02/06/90	1.016	0.14 >	10.00 >	73.19 >	74.34
1603		196 MT2	02/07/90	1.177	0.22 >	10.00 >	44.70 >	66.53
1603		193 MT2	02/07/90	1.181	0.17 >	10.00 >	57.64 >	70.03
1603		1A1 MT2	02/08/90	1.232	0.20 >	10.00 >	49.26 >	68.31
1603		19W MT2	02/08/90	1.279	0.16 >	10.00 >	70.85 >	74.23
1603		1A0 MT2	02/13/90	1.092	0.37 >	10.00 >	26.71 >	65.11
1603		1A3 MT2	02/13/90	1.112	0.36 >	10.00 >	27.66 >	44.42
1603		1B1 MT2	02/14/90	1.041	0.12 >	10.00 >	86.47 >	78.43
1603		1B2 MT2	02/14/90	1.166	0.10 >	10.00 >	103.31 >	77.36
1603		1B3 MT2	02/20/90	1.200	0.10 >	10.00 >	95.42 >	80.73
1603		1B8 MT2	02/20/90	1.134	0.07 >	10.00 >	143.31 >	84.85
1603		1C8 MT2	02/27/90	1.112	0.07 >	10.00 >	140.75 >	84.45
1603		1D6 MT2	02/27/90	1.187	0.14 >	10.00 >	74.21 >	76.84
1603		1C8 MT2	02/28/90	1.173	0.10 >	10.00 >	95.62 >	81.74
1603		1D5 MT2	03/01/90	1.004	0.05 >	10.00 >	195.02 >	86.84
1603		1D4 MT2	03/02/90	1.323	0.03 >	10.00 >	393.18 >	54.83
1603		1E0 MT2	03/06/90	1.160	0.13 >	10.00 >	76.44 >	76.44
1603		1D7 MT2	03/06/90	1.233	0.16 >	10.00 >	72.82 >	76.44
1603		1E4 MT2	03/07/90	1.203	0.15 >	10.00 >	66.56 >	70.24
1603		1E4 MT2	03/08/90	1.325	0.14 >	10.00 >	74.15 >	75.13
1603		1FD MT2	03/13/90	1.241	0.26 >	10.00 >	38.37 >	65.32
1603		1FG MT2	03/15/90	1.136	0.13 >	10.00 >	74.77 >	76.83
1603		1G0 MT2	03/17/90	1.239	0.12 >	10.00 >	81.99 >	73.96
1603		1F2 MT2	03/20/90	1.054	0.15 >	10.00 >	64.63 >	71.54
1603		1G7 MT2	03/21/90	1.051	0.21 >	10.00 >	46.56 >	67.26
1603		1G8 MT2	03/28/90	1.288	0.47 >	9.27	16.68 >	51.53
1603		1H0 MT2	03/28/90	1.347	0.47 >	10.00 >	21.10 >	55.00
1603		1KX MT2	04/04/90	1.263	0.35 >	10.00 >	28.65 >	53.57
1603		1H0 MT2	04/10/90	1.022	0.12 >	10.00 >	54.97 >	72.55
1603		1H0 MT2	04/12/90	1.109	0.11 >	10.00 >	89.79 >	81.43
1603		1JF MT2	04/18/90	1.069	0.34 >	10.00 >	29.26 >	65.82
1603		1JQ MT2	04/24/90	0.991	0.32 >	10.00 >	31.25 >	58.37
1603		1JK MT2	04/24/90	0.927	0.34 >	10.00 >	29.23 >	58.46
1603		1L6 MT2	05/02/90	1.161	0.18 >	10.00 >	55.21 >	70.62
1603		1KV MT2	05/02/90	1.166	0.29 >	10.00 >	33.87 >	57.02
1603		1L1 MT2	05/03/90	1.254	0.15 >	10.00 >	64.65 >	72.63
1603		1LC MT2	05/03/90	1.261	0.13 >	10.00 >	79.24 >	77.34
1603		1M2 MT2	05/08/90	1.051	0.21 >	10.00 >	44.34 >	70.82
1603		1LY MT2	05/09/90	1.088	0.12 >	10.00 >	81.58 >	77.03
1603		1LW MT2	05/09/90	1.079	0.12 >	10.00 >	83.82 >	77.63
1603		1MM MT2	05/10/90	1.022	0.34 >	10.00 >	28.97 >	51.62
1603		1LU MT2	05/10/90	0.905	0.20 >	10.00 >	59.02 >	68.92
1603		1LR MT2	05/10/90	1.004	0.23 >	10.00 >	64.10 >	65.72
1603		1R0 MT2	05/10/90	0.825	0.18 >	10.00 >	55.24 >	70.63
1603		1M7 MT2	05/15/90	0.993	0.15 >	10.00 >	67.86 >	73.66
1603		1R5 MT2	05/15/90	0.933	0.15 >	10.00 >	55.61 >	75.04
1603		1MF MT2	05/16/90	1.033	0.12 >	10.00 >	42.70 >	78.14
1603		1M1 MT2	05/16/90	1.073	0.22 >	10.00 >	45.12 >	70.02
1603		1OB MT2	05/22/90	1.037	0.13 >	10.00 >	77.94 >	79.83
1603		1OH MT2	05/24/90	1.261	0.10 >	10.00 >	100.30 >	79.24
1603		1O6 MT2	05/24/90	1.141	0.08 >	10.00 >	118.64 >	82.73
1603		1O1 MT2	05/24/90	1.192	0.10 >	10.00 >	100.00 >	81.73
1603		1OK MT2	05/30/90	1.063	0.15 >	10.00 >	56.33 >	69.83
1603		1OE MT2	05/30/90	1.022	0.15 >	10.00 >	67.86 >	68.63
1603		1PB MT2	06/05/90	0.948	0.19 >	10.00 >	53.78 >	71.92
1603		1P1 MT2	06/06/90	1.004	0.11 >	10.00 >	90.94 >	80.13
1603		1PG MT2	06/06/90	0.986	0.11 >	10.00 >	91.28 >	81.24
1603		1PE MT2	06/06/90	1.017	0.11 >	10.00 >	90.76 >	80.83
1603		1PN MT2	06/07/90	1.118	0.13 >	10.00 >	79.76 >	76.63
1603		1P7 MT2	06/12/90	0.932	0.14 >	10.00 >	71.03 >	69.80
1603		1QA MT2	06/26/90	0.936	0.10 >	10.00 >	96.07 >	77.53
1603		1QM MT2	06/27/90	1.077	0.07 >	10.00 >	162.77 >	83.15
1603		1QC MT2	06/27/90	1.050	0.09 >	10.00 >	117.02 >	70.97
1603		1QO MT2	06/28/90	1.156	0.12 >	10.00 >	86.69 >	80.83

## CUMULATIVE SUMMARY (cont'd)

AV#	Ship-	Plt	Cell	Test	Diff-	Date	mtl.	TC 50	TC 25	SI	TAI
1603		18H	MT2	PA/28/90	0.981			0.35 >	10.00 >	28.72 >	68.73
1603		18D	MT2	U7/03/90	1.008			0.14 >	10.00 >	73.50 >	74.63
1603		18G	MT2	07/03/90	1.008			0.21 >	10.00 >	43.34 >	63.02
1603		18J	MT2	07/11/90	1.006			0.27 >	10.00 >	37.55 >	61.62
1603		18Y	MT2	07/12/90	1.514			0.19 >	10.00 >	52.74 >	63.77
1603		18Q	MT2	07/17/90	1.126			0.28 >	10.00 >	34.31 >	66.02
1603		18M	MT2	07/17/90	1.114			0.27 >	10.00 >	37.70 >	66.72
1603		18K	MT2	07/17/90	1.008			0.26 >	10.00 >	37.94 >	67.52
1603		18I	MT2	07/17/90	1.075			0.26 >	10.00 >	37.94 >	67.62
1603		18F	MT2	07/17/90	1.071			0.29 >	10.00 >	33.96 >	66.02
1603		17B	MT2	07/18/90	1.003			0.06 >	10.00 >	172.05 >	85.53
1603		17S	MT2	07/18/90	1.104			0.07 >	10.00 >	134.97 >	83.63
1603		10S	MT2	07/24/90	1.281			0.05 >	10.00 >	204.03 >	84.93
1603		10G	MT2	07/25/90	1.239			0.07 >	10.00 >	139.42 >	79.93
1603		10G	MT2	07/26/90	1.278			0.31 >	10.00 >	32.06 >	62.32
1603		1X7	MT2	07/26/90	1.222			0.08 >	10.00 >	126.59 >	77.93
1603		1X8	MT2	07/28/90	1.196			0.18 >	10.00 >	56.06 >	69.02
1603		1W	MT2	07/31/90	1.209			0.59 >	10.00 >	16.84 >	48.66
1603		1W	MT2	08/01/90	1.304			0.18 >	10.00 >	55.21 >	71.13
1603		1X1	MT2	08/02/90	1.284			0.47 >	10.00 >	21.37 >	56.61
1603		1XR	MT2	08/07/90	1.151			0.17 >	10.00 >	58.22 >	69.53
1603		1ZJ	MT2	08/07/90	1.246			0.15 >	10.00 >	67.86 >	75.13
1603		1XY	MT2	08/07/90	1.139			0.21 >	10.00 >	47.97 >	68.83
1603		1YH	MT2	08/08/90	1.305			0.18 >	10.00 >	54.51 >	71.23
1603		1ZC	MT2	08/09/90	1.297			0.14 >	10.00 >	71.92 >	76.06
1603		1Z4	MT2	08/09/90	1.161			0.07 >	10.00 >	141.99 >	84.84
1603		22B	MT2	08/14/90	1.270			0.13 >	10.00 >	80.03 >	77.44
1603		210	MT2	08/14/90	1.298			0.39 >	10.00 >	25.40 >	80.51
1603		216	MT2	08/15/90	1.312			0.14 >	10.00 >	73.55 >	76.84
1603		20P	MT2	08/15/90	1.317			0.48 >	10.00 >	20.64 >	49.30
1603		20W	MT2	08/15/90	1.303			0.58 >	10.00 >	17.23 >	66.22
1603		210	MT2	08/16/90	1.356			0.11 >	10.00 >	87.88 >	77.45
1603		211	MT2	08/16/90	1.264			0.45 >	10.00 >	22.64 >	55.51
1603		244	MT2	08/21/90	1.179			0.11 >	10.00 >	87.58 >	79.33
1603		226	MT2	08/21/90	1.129			0.14 >	10.00 >	72.20 >	75.92
1603		244	MT2	08/22/90	1.117			0.14 >	10.00 >	68.99 >	72.22
1603		233	MT2	08/22/90	1.206			0.36 >	10.00 >	28.01 >	64.52
1603		229	MT2	08/22/90	1.103			0.14 >	10.00 >	68.99 >	73.32
1603		241	MT2	08/23/90	1.127			0.09 >	10.00 >	115.31 >	81.84
1603		23V	MT2	08/23/90	1.195			0.16 >	10.00 >	79.85 >	76.14
1603		23F	MT2	08/23/90	1.140			0.09 >	10.00 >	111.66 >	81.64
1603		24C	MT2	08/23/90	1.184			0.13 >	10.00 >	74.37 >	77.14
1603		244	MT2	08/23/90	1.136			0.09 >	10.00 >	114.81 >	81.94
1603		251	MT2	08/29/90	1.329			0.58 >	10.00 >	17.37 >	47.42
1603		25A	MT2	08/29/90	1.333			0.58 >	10.00 >	17.37 >	43.82
1603		25W	MT2	08/30/90	1.357			1.12 >	10.00 >	3.92 >	35.73
1603		25E	MT2	08/30/90	1.497			1.17 >	10.00 >	8.52 >	33.23
1603		27Y	MT2	08/30/90	1.283			1.14 >	10.00 >	8.79 >	38.55
1603		294	MT2	09/04/90	1.297			0.97 >	10.00 >	10.32 >	75.48
1603		26V	MT2	09/05/90	1.197			0.57 >	10.00 >	17.39 >	47.80
1603		29U	MT2	09/25/90	1.313	<		0.03 >	10.00 >	312.50 >	96.23
1603		298	MT2	09/05/90	1.376			0.13 >	10.00 >	77.81 >	75.34
1603		285	MT2	09/06/90	1.111			0.53 >	10.00 >	13.73 >	51.40
1603		246	MT2	09/12/90	1.010			0.35 >	10.00 >	27.58 >	57.71
1603		294	MT2	09/12/90	1.053			0.36 >	10.00 >	27.81 >	58.11
1603		2AF	MT2	09/13/90	1.114			0.44 >	10.00 >	22.51 >	54.51
1603		291	MT2	09/13/90	1.169			0.44 >	10.00 >	21.95 >	54.11
1603		281	MT2	09/13/90	1.025			1.09 >	10.00 >	9.16 >	40.42
1603		20D	MT2	09/25/90	0.955	<		0.03 >	10.00 >	312.50 >	59.94
1603		204	MT2	09/26/90	0.663	<		0.03 >	7.60 >	237.50 >	65.85
1603		2EC	MT2	09/27/90	0.916	<		0.03 >	10.00 >	312.50 >	96.93
1603		2FW	MT2	09/28/90	1.052	<		0.03 >	10.00 >	312.50 >	75.76
1603		2GK	MT2	10/02/90	0.516	<		0.03 >	10.00 >	312.50 >	88.26
1603		21W	MT2	10/04/90	0.847	<		0.03 >	4.75 >	148.30 >	68.05
1603		2L0	MT2	10/09/90	0.340	<		0.03 >	7.34 >	229.35 >	65.12
1603		29S	MT2	10/10/90	0.728	<		0.03 >	0.04 >	1.85 >	62.73
1603		296	MT2	10/12/90	0.608	<		0.03 >	10.00 >	312.50 >	81.72
1603		20W	MT2	10/17/90	0.632	<		0.03 >	10.00 >	312.50 >	97.51
1603		28X	MT2	10/18/90	0.373	<		0.03 >	6.76 >	211.31 >	86.57
1603		204	MT2	10/23/90	0.952	<		0.03 >	10.00 >	312.50 >	92.59
1603		2T1	MT2	10/23/90	0.021	<		0.03 >	10.00 >	312.50 >	93.10
1603		206	MT2	10/26/90	0.874	<		0.03 >	10.00 >	312.50 >	93.29
1603		20W	MT2	10/30/90	1.078	<		0.03 >	10.00 >	312.50 >	98.91
1603		111	MT2	10/31/90	1.07	>	0.027	0.00613	>	4.36 >	24.33
1603		270	MT2	11/01/90	1.205	<		0.03 >	10.00 >	312.50 >	96.02
1603		229	MT2	11/02/90	1.178	<		0.03 >	10.00 >	312.50 >	95.13
1603		26D	MT2	11/04/90	1.212	<		0.03 >	10.00 >	312.50 >	97.42
1603		271	MT2	11/07/90	1.204	<		0.03 >	10.00 >	312.50 >	95.34

## CUMULATIVE SUMMARY (cont'd)

AMR	Ship-	Flt	Cels.	Test	Diff-					
No.	ment	#	Line	Date	mtl.	IC 50	TC 25	\$1	TAI	
1603		30H	HT2	11/08/90	1.056	<	0.03	>	10.00	> 312.50
1603		32T	HT2	11/09/90	1.162	<	0.03	>	10.00	> 312.50
1603		34G	HT2	11/13/90	1.182	<	0.03	>	10.00	> 312.50
1603		35S	HT2	11/14/90	0.782	<	0.03	>	10.00	> 312.50
1603		36G	HT2	11/20/90	0.893	<	0.03	>	10.00	> 312.50
1603		37B	HT2	11/21/90	0.702	<	0.03	>	10.00	> 312.50
1603		37D	HT2	11/27/90	0.905	<	0.03	>	10.00	> 312.50
1603		38U	HT2	11/29/90	1.048	<	0.03	>	0.32	> 10.00
1603		39Y	HT2	11/30/90	1.204	<	0.03	>	3.61	> 112.50
1603		38Z	HT2	12/06/90	0.669	<	0.03	>	10.00	> 312.50
1603		3C8	HT2	12/11/90	1.067	<	0.03	>	10.00	> 312.50
1603		3DC	HT2	12/12/90	1.007	<	0.03	>	10.00	> 312.50
1603		3ED	HT2	12/12/90	0.920	<	0.03	>	10.00	> 100.00
1603		3EF	HT2	12/13/90	1.031	<	0.03	>	10.00	> 312.50
1603		3F5	HT2	12/20/90	0.461	<	0.03	>	10.00	> 100.00
1603		3HO	HT2	01/08/91	1.222	<	0.03	>	10.00	> 312.50
1603		31O	HT2	01/09/91	1.353	<	0.03	>	6.42	> 200.66
1603		34M	HT2	01/11/91	1.399	<	0.03	>	1.26	> 38.89
1603		3M1	HT2	01/17/91	1.176	<	0.03	>	5.71	> 178.29
1603		3MV	HT2	01/18/91	1.438	<	0.03	>	3.05	> 95.42
1603		3O1	HT2	01/21/91	1.423	<	0.03	>	7.15	> 223.39
1603		4J2	HT2	01/22/91	1.259	<	0.03	>	2.85	> 88.14
1603		44P	HT2	01/22/91	1.106	<	0.03	>	4.25	> 132.69
1603		32D	HT2	01/23/91	1.318	<	0.03	>	0.95	> 29.73
1603		46S	HT2	01/24/91	1.354	<	0.03	>	2.35	> 73.54
1603		3U7	HT2	01/24/91	1.268	<	0.03	>	1.44	> 107.59
1603		32S	HT2	01/25/91	0.973	<	0.03	>	1.24	> 38.62
1603		44X	HT2	01/29/91	1.390	<	0.03	>	2.10	> 65.63
1603		481	HT2	01/31/91	1.465	<	0.03	>	2.73	> 85.27
1603		495	HT2	02/05/91	1.134	<	0.03	>	0.89	> 27.71
1603		4A5	HT2	02/08/91	1.384	<	0.03	>	2.05	> 64.13
1603		4C3	HT2	02/20/91	1.456	<	0.03	>	2.98	> 93.13
1603		4C1	HT2	02/21/91	1.359	<	0.03	>	7.61	> 231.55
1603		4SL	HT2	02/22/91	1.325	<	0.03	>	7.03	> 219.53
1644	64	1KA	CEN	04/26/90	0.600		18.30	>	100.00	> 5.64
1644	68	21Y	CEN	08/14/90	1.013		55.20	>	100.00	> 1.81
1644	64	110	HT2	04/10/90	1.034		0.00		51.30	> 0.00
1644	68	1X2	HT2	08/02/90	1.244		0.00		57.40	> 0.00
1653	67	20B	CEN	08/07/90	1.178		0.00		27.20	> 0.00
1653	67	1UB	HT2	07/24/90	1.224		0.00		> 100.00	> 0.00
1654	53	0WV	HT2	05/24/89	1.308		0.00		3.78	> 0.00
1654	46	0WV	HT2	08/08/89	1.206		0.00		3.20	> 0.00
1654	67	1UB	HT2	07/24/90	1.230		0.00		1.89	> 0.00
1655	62	172	HT2	01/24/90	1.207		0.00		37.80	> 0.00
1752	53	0WQ	HT2	05/24/89	1.402		0.00		14.50	> 0.00
1752	46	0B1	HT2	08/08/89	1.299		0.00		32.90	> 0.00
1760	21	01R	HT2	11/22/88	1.770		0.00		> 100.00	> 0.00
1761	21A	2UR	HT2	10/26/90	0.860		0.00		> 100.00	> 0.00
1764	68	1X2	HT2	08/02/90	1.244		0.00		> 100.00	> 1.90
1767	8A	0DF	HT2	04/21/89	1.022		0.00		> 100.00	> 1.00
1768	10A	019	HT2	05/22/89	1.277		0.00		40.90	> 0.00
1776	21A	2UR	HT2	10/26/90	0.810		0.00		> 100.00	> 4.14
1790	53	10J	HT2	10/26/89	1.204		0.00		1.00	> 0.00
1795	1A	018	HT2	11/22/88	1.717		0.00		4.90	> 0.00
1901	67	209	CEN	08/07/90	1.075		88.00	>	100.00	> 1.67
1901	53	04W	HT2	05/24/89	1.402		44.30	>	100.00	> 2.16
1901	67	1U9	HT2	07/24/90	1.172		0.00		> 100.00	> 8.37
1911	45	038	HT2	12/01/88	2.017		0.00		> 100.00	> 0.70
1829	67	205	CEN	08/07/90	1.075		0.00		> 100.00	> 8.72
1829	67	1U9	HT2	07/24/90	1.172		0.00		> 100.00	> 2.14
1838	64	111	HT2	04/19/90	1.040		0.00		> 100.00	> 2.44
1841	55	1RU	CEN	07/05/90	1.144		5.04	>	100.00	> 19.88
1841	53	0WQ	HT2	05/24/89	1.295		0.00		95.00	> 0.00
1841	65	1J1	HT2	04/18/90	1.130		0.00		> 100.00	> 0.70
1846	65	1WV	CEN	07/05/90	1.117		2.22	>	100.00	> 44.95
1846	68	1XQ	CEN	08/01/90	1.038		32.00	>	100.00	> 3.13
1846	65	1J1	HT2	04/18/90	1.130		0.00		> 100.00	> 0.13
1850	53	0WQ	HT2	05/24/89	1.295		7.2	>	100.00	> 13.80
1850	67	1U4	HT2	07/24/90	1.104		7.59	>	100.00	> 13.18
1901	67	1U4	HT2	07/24/90	1.104		0.00		61.30	> 0.00
1973	67	1UB	HT2	07/24/90	1.291		0.00		44.60	> 0.00
1976	67	1UB	HT2	07/24/90	1.291		0.00		42.00	> 0.00
1983	61	1OC	HT2	10/31/89	1.376		0.00		> 100.00	> 1.96
1985	53	0WY	HT2	09/24/89	1.390		0.00		0.50	> 0.00
1985	67	1UC	HT2	07/24/90	1.164		0.00		0.95	> 0.00
2026	53	0WY	HT2	09/24/89	1.390		0.00		48.80	> 0.00
2034	54	0OB	HT2	07/29/89	0.837		0.00		1.24	> 0.00
2158	67	1UC	HT2	07/24/90	1.164		0.00		> 100.00	> 1.93

## Cumulative Summary (cont'd)

AVS	Ship-	Plt Cell	Test	Diff-					
No.	mt	# Line	Date	mttl.	TC 50	TC 25	SI	TAI	
2162	53	01J MT2	05/26/89	1.446	0.00	100.00	0.00 >	0.28	
2274	67	10D MT2	07/26/90	1.262	0.00	49.00	0.00 >	2.21	
2275	53	01J MT2	05/24/89	1.666	0.00	10.70	0.00 >	0.27	
2275	67	10D MT2	07/24/90	1.262	0.00	34.90	0.00 >	3.96	
2299	68	1YR CEM	08/02/90	0.876	0.00	10.00	0.00 >	0.00	
2309	53	01K MT2	05/24/89	1.385	0.00 >	100.00	0.00 >	3.89	
2311	13	043 MT2	12/21/88	1.054	0.00 >	100.00	0.00 >	1.80	
2317	17	044 MT2	12/21/88	1.096	0.00	7.35	0.00 >	4.92	
2318	67	20A CEM	08/07/90	1.163	0.00 <	0.32	0.00	0.00	
2318	53	01K MT2	05/24/89	1.385	0.00 <	0.32	0.00	0.00	
2318	53	101 MT2	10/25/89	1.360	0.00	0.07	0.00	0.20	
2318	67	1UE MT2	07/24/90	1.239	0.00 <	0.32	0.00	0.00	
2320	53	01L MT2	05/24/89	1.602	0.00	0.74	0.00 >	0.00	
2354	62	1DE CEM	12/28/90	0.99	> 60	< 0.13	> 320.00	> 83.92	
2354	62	4CP CEM	02/20/91	0.722	0.00	33.50	0.00	0.00	
2354	62	4CE MT2	02/20/91	1.473	0.00	2.68	0.00	0.00	
2358	68	1YR CEM	08/02/90	0.876	0.00	55.90	0.00 >	0.63	
2396	68	1YS CEM	08/02/90	0.833	0.00 >	100.00	0.00	0.00	
2397	74	34V CEM	11/13/90	0.839	0.00 >	100.00	0.00	0.63	
2397	53	01L MT2	05/24/89	1.502	0.00 >	100.00	0.00 >	0.80	
2397	74	348 MT2	11/13/90	1.160	0.00 >	100.00	0.00	0.00	
2422	68	1YS CEM	08/02/90	0.833	0.00	60.80	0.00	0.40	
2432	13	044 MT2	12/21/88	1.096	0.00	58.40	0.00 >	2.01	
2433	17	045 MT2	12/21/88	1.141	0.00	75.60	0.00 >	15.12	
2434	17	045 MT2	12/21/88	1.141	0.00	63.50	0.00 >	4.61	
2439	17	046 MT2	12/21/88	1.046	0.00	17.50	0.00	3.21	
2443	18	046 MT2	12/21/88	1.046	0.00 >	100.00	0.00 >	3.81	
2444	68	1YT CEM	08/02/90	0.778	0.00 >	100.00	0.00 >	13.02	
2444	18	01S MT2	11/22/88	1.717	0.00 >	100.00	0.00 >	9.43	
2445	74	34U CEM	11/13/90	0.829	0.00 >	100.00	0.00	0.00	
2445	74	34C MT2	11/13/90	1.153	0.00	100.00	0.00	0.00	
2451	18	047 MT2	12/21/88	0.962	0.00	15.60	0.00 >	2.80	
2455	68	1YT CEM	08/02/90	0.778	0.00	1.59	0.00	0.00	
2458	18	047 MT2	12/21/88	0.962	0.00	4.92	0.00 >	1.50	
2460	18	01T MT2	11/22/88	1.603	0.00 >	100.00	0.00 >	4.40	
2481	19	048 MT2	12/21/88	1.042	0.00	100.00	0.00 >	8.13	
2482	19	048 MT2	12/21/88	1.042	0.00	13.80	0.00 >	2.15	
2483	19	049 MT2	12/21/88	1.109	0.00 >	100.00	0.00 >	7.41	
2489	19	049 MT2	12/21/88	1.109	0.00 >	100.00	0.00 >	5.35	
2503	67	24T CEM	08/21/90	0.523	0.00	0.32	0.00	0.00	
2503	53	01M MT2	05/24/89	1.593	0.00 <	0.32	0.00	0.00	
2503	53	102 MT2	10/25/89	1.320	0.00	0.16	0.00	1.37	
2503	67	10E MT2	07/24/90	1.289	0.00 <	0.32	0.00	0.00	
2561	56	1L1 MT2	05/09/90	1.105	0.00 <	0.32	0.00	0.00	
2568	67	1UF MT2	07/24/90	1.251	0.00	44.60	0.00 >	2.14	
2570	56	1LJ MT2	05/09/90	1.105	0.00	14.10	0.00 >	6.89	
2572	56	1LJ MT2	05/09/90	1.105	6.66 >	100.00 >	15.02 >	45.39	
2572	65	1MT MT2	05/15/90	0.989	13.00 >	100.00 >	7.69 >	43.98	
2573	65	24T CEM	08/21/90	0.523	33.40 >	100.00 >	2.99 >	41.87	
2573	56	1LJ MT2	05/09/90	1.103	32.70 >	100.00 >	3.04 >	28.75	
2573	56	1UZ CEM	07/19/90	0.578	10.60 >	100.00 >	9.47 >	39.79	
2573	56	1LK MT2	05/09/90	1.112	5.51 >	100.00 >	18.16 >	47.09	
2576	56	1LK MT2	05/09/90	1.112	5.06 >	100.00 >	19.78 >	48.19	
2579	56	1LL MT2	05/09/90	0.945	0.00 >	100.00	0.00 >	2.79	
2580	56	1LL MT2	05/09/90	0.945	0.00	2.00	0.00 >	1.75	
2581	65	24U CEM	08/21/90	0.820	16.10 >	100.00 >	6.22 >	26.48	
2581	56	1LH MT2	05/09/90	1.182	5.91 >	100.00 >	16.91 >	45.19	
2581	65	1MT MT2	05/15/90	0.989	13.60 >	100.00 >	7.44 >	42.58	
2582	65	24U CEM	08/21/90	0.820	28.00 >	100.00 >	3.57 >	15.71	
2582	54	1LD MT2	05/03/90	1.232	17.00 >	100.00 >	5.89 >	38.07	
2582	65	1MU MT2	05/15/90	1.077	36.80 >	100.00 >	2.72 >	27.95	
2582	65	1T6 MT2	07/18/90	1.087	8.99 >	332.00 >	37.34 >	28.88	
2585	65	1MS CEM	05/16/90	1.508	20.50 >	100.00 >	6.87 >	16.97	
2585	56	1LD MT2	05/03/90	1.232	6.56 >	100.00 >	15.24 >	44.69	
2585	65	1MU MT2	05/15/90	1.077	12.30 >	100.00 >	8.11 >	44.69	
2585	65	1T6 MT2	07/18/90	1.087	12.30 >	311.00 >	25.24 >	29.15	
2585	65	21J MT2	08/16/90	1.279	13.00 >	100.00 >	7.25 >	33.23	
2586	56	1TO CEM	07/17/90	1.363	0.00	58.30	0.00	1.48	
2586	56	1LE MT2	05/03/90	1.343	0.00	100.00	0.00 >	7.57	
2589	65	1MS CEM	05/16/90	1.508	38.60 >	100.00 >	2.61 >	18.66	
2589	56	1LE MT2	05/03/90	1.345	14.20 >	100.00 >	7.02 >	33.78	
2589	65	1WV MT2	05/15/90	1.060	9.71 >	100.00 >	10.30 >	33.28	
2589	65	1T7 MT2	07/18/90	1.113	17.50 >	311.00 >	17.81 >	23.45	
2589	62	21J MT2	08/16/90	1.279	17.00 >	50.50	2.97 >	16.96	
2600	65	1MT CEM	05/16/90	1.420	54.30 >	100.00 >	1.84 >	8.18	
2600	56	1LF MT2	05/03/90	1.237	4.53 >	100.00 >	22.04 >	60.11	
2600	65	1WV MT2	05/15/90	1.060	20.20 >	100.00 >	4.94 >	35.57	
2600	65	1T7 MT2	07/18/90	1.113	0.00 >	1.00	0.00 >	8.35	

## CUMULATIVE SUMMARY (cont'd)

AVB No.	Ship- ment	Blk #	Cell Line	Test Date	Diff- mtl.	IC 50	TC 25	SI	TAT
2630	56	227	MT2	08/21/90	1.131	14.90 > 100.00	>	6.71 >	35.07
2630		18L	CEN	03/02/90	0.696	<	0.00	1.41 >	0.00 >
2630	54	00W	MT2	08/03/90	1.055	0.00	43.50	0.00 >	2.86
2630	54	15V	CEN	07/19/90	0.649	0.00 >	100.00	0.00	18.54
2630	54	11F	MT2	05/03/90	1.237	0.00 >	100.00	0.00 >	2.20
2630	56	11G	MT2	05/03/90	1.246	16.50 > 100.00	>	6.07 >	18.77
2630	65	17B	MT2	07/18/90	1.084	0.00 >	1.00	0.00 >	3.84
2630	56	11G	MT2	05/03/90	1.246	0.00	66.00	0.00 >	0.10
2630	65	1M	MT2	05/15/90	0.908	0.00	28.30	0.00 >	6.22
2630	56	11Z	MT2	05/03/90	1.185	41.10 > 100.00	>	2.44 >	21.84
2639		04Y	CEN	03/28/89	1.361	<	0.03	0.83 >	25.90 >
2639		1C3	CEN	02/22/90	0.880	<	0.03	0.10 >	2.96 >
2639		1F3	CEN	03/20/90	1.335	0.00	0.08	0.00 >	16.10
2639		1F4	CEN	03/20/90	1.315	0.01 >	0.10 >	18.66 >	26.50
2639		1G3	CEN	03/21/90	1.478	0.05	0.47	10.14 >	30.02
2639		1K3	CEN	04/01/90	0.949	0.04	0.25	6.37 >	27.18
2639		1JC	CEN	04/18/90	0.989	<	0.03	0.25 >	7.71 >
2639		1K3	CEN	04/24/90	0.700	<	0.03	0.25 >	7.85 >
2639		1M1	CEN	05/10/90	1.414	<	0.03	0.21 >	6.56 >
2639		1M2	CEN	05/16/90	1.386	0.10	0.29	2.93 >	28.80
2639		1M3	CEN	06/24/90	1.455	0.79 >	10.00 >	12.71 >	48.18
2639		1M9	CEN	07/05/90	1.044	<	0.33	0.28 >	8.43 >
2639		1T8	CEN	07/17/90	1.616	0.06	0.68	10.94 >	15.69
2639		1U1	CEN	07/19/90	0.723	0.03 >	10.00 >	316.23 >	30.61
2639		1V1	CEN	07/24/90	0.840	0.07	0.10	1.43 >	13.81
2639		21X	CEN	04/14/90	0.826	0.06 >	10.00 >	157.19 >	26.70
2639		22M	CEN	08/15/90	1.045	0.36	0.44	6.82 >	10.48
2639		239	CEN	08/16/90	0.800	0.06	7.58	178.47 >	30.10
2639		243	CEN	08/21/90	0.696	0.06	0.34	5.61 >	10.66
2639		26J	CEN	08/29/90	0.771	0.06	0.69	11.76 >	18.38
2639		28T	CEN	09/04/90	0.933	0.09	0.15	5.20 >	19.11
2639		29E	CEN	09/05/90	1.300	0.02	0.84	54.17 >	28.84
2639		27J	CEN	05/06/90	0.838	0.01	0.60	75.54 >	19.69
2639		2AU	CEN	09/11/90	0.899	0.05	0.51	11.02 >	23.15
2639		2EX	CEN	09/27/90	0.868	<	0.03	0.20 >	6.18 >
2639		2H4	CEN	10/02/90	0.672	< 0.0001	0.01 >	100.00 >	34.31
2639		211	CEN	10/03/90	0.377	< 0.0001	0.36	3571.4 >	52.04
2639		2XX	CEN	10/05/90	0.701	< 0.0001	0.03 >	300.00 >	27.37
2639		107	CEN	10/17/90	2.01	> 0.211	0.00872 >	26.18 >	40.07
2639		2VA	CEN	10/30/90	0.955	0.01	0.09	10.08 >	21.42
2639		2XH	CEN	10/31/90	1.140	0.03	0.10	2.84 >	16.66
2639		22X	CEN	11/01/90	1.207	0.05	0.07	1.26 >	11.03
2639		31P	CEN	11/02/90	0.937	0.005	0.09	17.90 >	18.17
2639		2W2	CEN	11/06/90	0.776	0.02	1.33	57.19 >	28.97
2639		223	CEN	11/07/90	1.074	0.03	0.09	3.60 >	22.29
2639		312	CEN	11/08/90	1.061	0.02	0.63	39.34 >	27.65
2639		330	CEN	11/09/90	1.311	0.03	0.45	14.02 >	19.77
2639		340	CEN	11/13/90	0.962	0.02	0.08	4.64 >	19.04
2639		35L	CEN	11/14/90	0.581	0.002	0.26	172.98 >	37.08
2639		368	CEN	11/20/90	0.751	0.01	0.87	91.82 >	34.71
2639		370	CEN	11/21/90	0.720	0.01	0.00004	0.01	35.30
2639		38A	CEN	11/27/90	1.146	0.02	0.36	19.14 >	28.93
2639		39E	CEN	11/29/90	1.490	0.01	0.00	0.12 >	12.01
2639		3AA	CEN	11/30/90	1.369	0.04	0.07	1.95 >	10.96
2639		3M	CEN	12/06/90	0.641	0.002	0.000006	0.03	41.19
2639		3C8	CEN	12/11/90	0.910	0.02	0.28	14.57 >	24.28
2639		3D7	CEN	12/12/90	1.286	0.04	0.00	0.00	13.23
2639		3E8	CEN	12/13/90	1.299	0.01	0.06	6.79 >	14.10
2639		3FM	CEN	12/20/90	1.182	0.02	0.86	54.82 >	33.92
2639		3HC	CEN	01/04/91	1.328	0.03	0.71	28.00 >	29.53
2639		316	CEN	01/08/91	0.725	< 0.0001	0.0005 >	5.30 >	22.22
2639		348	CEN	01/09/91	0.801	0.004	0.58	86.77 >	23.91
2639		347	CEN	01/11/91	0.665	0.004	0.45	104.79 >	34.77
2639		34G	CEN	01/17/91	0.600	0.005	0.10	20.69 >	20.86
2639		34F	CEN	01/18/91	0.958	0.004	0.06	14.85 >	22.51
2639		308	CEN	01/21/91	0.684	0.002	1.59	670.57 >	53.01
2639		42J	CEN	01/22/91	0.758	0.03	0.01	0.32 >	14.04
2639		639	CEN	01/22/91	0.762	0.03	0.01	0.74 >	15.51
2639		413	CEN	01/23/91	0.970	0.004	0.07	17.62 >	24.25
2639		45F	CEN	01/23/91	1.145	0.01	0.05	6.08 >	15.73
2639		460	CEN	01/24/91	0.886	0.003	0.87	200.68 >	44.44
2639		368	CEN	01/24/91	0.908	0.003	0.68	205.47 >	44.60
2639		370	CEN	01/25/91	1.348	0.004	0.06	14.07 >	16.31
2639		471	CEN	01/29/91	0.813	0.002	0.08	36.90 >	33.12
2639		481	CEN	01/31/91	0.962	0.004	0.09	22.17 >	25.81
2639		490	CEN	02/05/91	1.238	0.01	0.07	6.68 >	16.54
2639		641	CEN	02/08/91	0.908	0.003	0.18	66.16 >	33.52
2639		401	CEN	02/20/91	0.758	0.004	0.06	12.37 >	25.13

## CUMULATIVE SUMMARY (cont'd)

AVS No.	Ship- ment	Plt Cell & Line	Date	Diff- rential	TC 50	TC 25	SI	TAI
2639		407 OEM	02/21/89	0.882	0.01	0.03	3.71	11.57
2639		40V OEM	02/22/91	0.515	0.01	0.05	7.28	11.35
2639		010 MT2	11/22/88	1.522	0.10 >	10.00 >	100.00 >	68.69
2639		021 MT2	11/22/88	1.750	0.17	8.20	47.20 >	59.72
2639		020 MT2	11/22/88	1.772	0.21	7.81	36.40 >	51.35
2639		029 MT2	11/29/88	1.623	0.30	4.17	13.80 >	42.77
2639		02Y MT2	11/29/88	1.279	0.20	4.08	20.70 >	34.00
2639		038 MT2	12/01/88	1.572	0.62 >	10.00 >	16.10 >	30.93
2639		03W MT2	12/01/88	1.827	0.40 >	10.00 >	25.30 >	52.65
2639		042 MT2	12/21/88	1.101	0.77 >	10.00 >	13.00 >	42.02
2639		04J MT2	12/21/88	1.012	0.85 >	10.00 >	11.80 >	45.90
2639		04T MT2	01/16/89	0.610	0.72 >	10.00 >	13.80 >	51.02
2639		05K MT2	02/01/89	0.792	0.73	9.06	12.10 >	31.12
2639		062 MT2	02/07/89	0.631	0.07	9.43	146.00 >	39.75
2639		06T MT2	02/14/89	0.539	0.34	5.47	16.00 >	38.99
2639		089 MT2	02/23/89	1.072	0.47	10.00	21.40 >	53.85
2639		091 MT2	03/16/89	1.252	0.65	6.24	13.80 >	43.30
2639		096 MT2	03/16/89	1.449	0.21	1.13	5.50 >	22.22
2639		081 MT2	03/28/89	1.530	0.69	6.69	13.70 >	47.65
2639		045 MT2	03/29/89	1.212	0.11 >	10.00 >	93.60 >	70.94
2639		048 MT2	03/30/89	1.173	0.46 >	10.00 >	21.80 >	53.25
2639		08K MT2	04/06/89	1.313	0.48 >	10.00 >	20.80 >	56.62
2639		08B MT2	04/06/89	1.372	0.61	6.22	10.10 >	30.85
2639		08H MT2	04/11/89	1.798	0.14 >	10.00 >	69.70 >	54.98
2639		08E MT2	04/11/89	1.062	0.73	8.68	11.80 >	31.75
2639		08C MT2	05/03/89	0.928	1.44 >	10.00 >	6.93 >	38.48
2639		080 MT2	05/09/89	1.235	0.16 >	10.00 >	63.50 >	66.93
2639		08F MT2	05/10/89	0.912	10.00	6.53	0.65	40.77
2639		08G MT2	05/10/89	1.175	10.00	6.98	0.70 >	44.20
2639		08U MT2	05/11/89	1.403	0.46 >	10.00 >	21.70 >	44.52
2639		08W MT2	05/16/89	1.347	0.55 >	10.00 >	18.10 >	65.12
2639		081 MT2	05/16/89	1.135	0.49 >	10.00 >	29.20 >	54.72
2639		085 MT2	05/16/89	1.136	0.49 >	10.00 >	20.40 >	54.92
2639		08T MT2	05/17/89	1.274	1.59	7.53	4.73 >	22.73
2639		08Z MT2	05/17/89	1.317	1.59	7.28	4.59 >	22.33
2639		084 MT2	05/17/89	1.029	0.52 >	10.00 >	19.10 >	45.58
2639		088 MT2	05/22/89	1.222	0.45 >	10.00 >	22.30 >	49.73
2639		08D MT2	05/22/89	1.149	0.43 >	10.00 >	23.40 >	52.52
2639		089 MT2	05/23/89	1.065	0.85	7.53	8.93 >	56.07
2639		08A MT2	05/23/89	1.022	0.65	9.27	14.30 >	43.14
2639		082 MT2	05/23/89	1.107	0.55	6.39	11.57 >	43.56
2639		08L MT2	05/24/89	1.395	0.47	4.64	9.68 >	36.17
2639		088 MT2	05/24/89	1.423	0.46	4.26	9.24 >	35.54
2639		081 MT2	05/24/89	1.528	0.49	4.28	8.75	33.87
2639		08O MT2	06/20/89	1.186	0.57 >	10.00 >	17.52 >	50.20
2639		08C MT2	06/20/89	1.150	0.55 >	10.00 >	18.22 >	49.33
2639		08Q MT2	06/20/89	1.091	0.54	10.00 >	18.45 >	50.60
2639		08S MT2	06/20/89	1.094	0.54	10.00 >	18.45 >	50.31
2639		08W MT2	06/21/89	1.151	0.58	1.70	4.47 >	26.78
2639		086 MT2	06/22/89	1.448	0.52 >	10.00 >	19.26 >	52.91
2639		086 MT2	06/27/89	1.169	1.21	7.45	6.14 >	40.81
2639		08K MT2	06/28/89	1.277	0.43	5.74	13.24	44.58
2639		08M MT2	06/28/89	1.183	0.43 >	10.00 >	23.40 >	52.78
2639		08R MT2	07/05/89	1.520	0.55 >	10.00 >	18.12 >	49.71
2639		08L MT2	07/05/89	1.489	0.56 >	10.00 >	17.98 >	48.82
2639		08E MT2	07/10/89	1.168	0.49	10.00 >	20.34 >	51.82
2639		08L MT2	07/10/89	1.105	0.55 >	10.00 >	18.07 >	45.44
2639		08V MT2	07/18/89	0.105	0.03 <	0.03 -	1.00 >	16.61
2639		001 MT2	07/19/89	0.892	0.63	10.00	23.11 >	51.11
2639		007 MT2	07/20/89	1.235	0.55 >	10.00 >	18.11 >	43.87
2639		00P MT2	07/25/89	0.760	0.34 >	10.00 >	25.30 >	54.79
2639		00T MT2	07/25/89	1.016	0.67	10.00 >	21.37 >	53.93
2639		00P MT2	07/25/89	0.954	0.48 >	10.00 >	20.76 >	52.34
2639		00V MT2	07/26/89	0.910	0.15	3.41	23.16	47.30
2639		00T MT2	07/26/89	1.168	0.42	6.28	14.88 >	41.38
2639		00P MT2	07/26/89	1.152	0.42	6.02	14.27	39.79
2639		00Z MT2	08/01/89	1.166	0.61 >	10.00 >	24.34 >	52.45
2639		002 MT2	08/01/89	1.175	0.44	8.93	21.65 >	49.46
2639		006 MT2	08/01/89	1.145	0.61	6.64	21.04 >	44.76
2639		008 MT2	08/01/89	1.204	0.48	6.87	18.41 >	43.26
2639		00T MT2	08/03/89	1.030	0.60 >	10.00 >	16.59 >	40.64
2639		00V MT2	08/03/89	1.047	0.60 >	10.00 >	16.59 >	38.78
2639		00E MT2	08/08/89	1.172	0.29 >	10.00 >	34.74 >	57.63
2639		000 MT2	08/08/89	1.247	0.31 >	10.00 >	32.28 >	61.64
2639		006 MT2	08/08/89	1.227	0.33 >	10.00 >	29.91 >	57.26
2639		008 MT2	08/08/89	1.455	0.29	10.00	34.17 >	47.94
2639		00C MT2	08/08/89	1.607	0.29 >	10.00 >	34.26 >	49.86
2639		00F MT2	08/09/89	1.644	0.35	7.40	21.32 >	49.16

## CUMULATIVE SUMMARY (cont'd)

AVB	Ship:	Plt Cell	Test	Diff-	IC 50	TC 25	SI	TAI
No.	ment	# Line	Date	mttl.				
2639	OAK	MT2	08/09/89	1.300	0.39	5.08	13.07	37.07
2639	OAK	MT2	08/09/89	1.205	0.36	6.68	16.43	46.55
2639	OAK	MT2	08/09/89	1.094	0.34	6.35	18.41	48.71
2639	OAK	MT2	08/17/89	1.450	0.35	> 10.00	> 20.17	> 59.63
2639	OAK	MT2	08/17/89	1.343	0.12	> 10.00	> 26.73	> 71.73
2639	OAK	MT2	08/22/89	1.562	0.52	3.78	7.26	36.16
2639	OAK	MT2	08/23/89	0.973	0.31	> 10.00	> 19.47	> 49.24
2639	OT2	MT2	03/23/89	1.354	0.49	7.42	15.13	48.46
2639	OT1	MT2	08/23/89	1.343	0.44	> 10.00	> 22.82	> 69.54
2639	OT0	MT2	08/24/89	1.174	0.34	> 10.00	> 29.30	> 58.58
2639	OTY	MT2	08/24/89	1.157	0.35	> 10.00	> 28.17	> 57.10
2639	OT2	MT2	08/24/89	0.959	0.45	> 10.00	> 22.06	> 52.49
2639	OT7	MT2	08/24/89	0.964	0.46	> 10.00	> 21.82	> 51.08
2639	OT8	MT2	08/24/89	1.312	0.40	> 10.00	> 25.08	> 54.10
2639	OT4	MT2	08/30/89	1.255	0.61	> 10.00	> 16.34	> 47.71
2639	OT9	MT2	08/30/89	1.237	0.61	> 10.00	> 16.34	> 47.31
2639	OTQ	MT2	08/31/89	1.201	0.33	> 10.00	> 29.91	> 57.16
2639	OT6	MT2	09/07/89	1.712	0.25	6.74	26.91	54.27
2639	OT1	MT2	09/07/89	1.743	0.25	6.67	26.62	54.69
2639	OT5	MT2	10/10/89	1.582	1.21	> 10.00	> 6.27	> 42.09
2639	OTM	MT2	10/11/89	1.068	0.20	> 10.00	> 49.41	> 66.17
2639	OT8	MT2	10/12/89	1.177	0.33	> 10.00	> 29.91	> 54.66
2639	OTY	MT2	10/12/89	1.407	0.46	> 10.00	> 21.65	> 50.06
2639	OT2	MT2	10/12/89	1.380	0.47	> 10.00	> 21.37	> 43.54
2639	OZ3	MT2	10/12/89	1.279	0.54	6.16	11.48	34.84
2639	OZ9	MT2	10/17/89	1.275	0.50	6.04	12.18	39.68
2639	OZC	MT2	10/17/89	1.202	0.49	6.26	12.71	42.92
2639	OZV	MT2	10/25/89	1.423	0.32	7.49	23.42	55.30
2639	OZ0	MT2	10/25/89	1.411	0.32	7.14	22.30	54.50
2639	OZF	MT2	10/26/89	1.275	0.20	> 10.00	> 49.74	> 58.57
2639	OZ1	MT2	10/26/89	1.231	0.19	8.59	44.59	51.38
2639	OZG	MT2	10/31/89	1.458	0.49	> 10.00	> 20.21	> 44.36
2639	OZ9	MT2	10/31/89	1.441	0.48	> 10.00	> 20.98	> 49.95
2639	OZM	MT2	11/02/89	1.246	0.49	> 10.00	> 20.27	> 50.33
2639	OZ1	MT2	11/02/89	1.322	0.68	> 10.00	> 16.71	> 28.24
2639	OZ2	MT2	11/07/89	1.330	0.52	> 10.00	> 19.38	> 47.93
2639	OZV	MT2	11/07/89	1.329	0.52	> 10.00	> 19.38	> 42.14
2639	OZ0	MT2	11/07/89	1.316	0.50	> 10.00	> 19.88	> 50.65
2639	OZT	MT2	11/07/89	1.307	0.50	> 10.00	> 20.01	> 43.24
2639	OZP	MT2	11/08/89	0.908	0.62	2.45	5.88	37.24
2639	OZ9	MT2	11/13/89	1.076	1.41	> 10.00	> 7.09	> 34.15
2639	OZD	MT2	11/21/89	1.488	0.33	> 10.00	> 29.91	> 57.44
2639	OZ8	MT2	11/28/89	1.576	0.37	7.00	18.92	51.01
2639	OZK	MT2	11/30/89	1.347	0.10	4.41	44.14	45.97
2639	OZL	MT2	11/30/89	1.050	0.04	2.90	69.07	62.00
2639	OZ4	MT2	12/05/89	1.328	0.72	8.86	6.76	27.30
2639	OZC	MT2	12/05/89	1.346	0.67	5.12	7.63	29.09
2639	OZ9	MT2	12/05/89	1.383	0.68	4.99	7.29	28.09
2639	OZ7	MT2	12/05/89	1.376	0.69	5.12	7.41	28.21
2639	OZL	MT2	12/07/89	1.062	0.15	> 10.00	> 67.38	> 74.73
2639	OZ8	MT2	12/14/89	1.353	0.42	8.83	20.93	52.57
2639	OZ6	MT2	12/20/89	1.309	0.18	> 10.00	> 54.54	> 65.25
2639	OZ3	MT2	12/20/89	1.358	0.29	5.47	18.54	40.24
2639	OZK	MT2	01/04/90	1.380	0.17	6.10	34.82	56.03
2639	OZT	MT2	01/17/90	1.106	0.26	8.35	32.09	56.59
2639	OZ4	MT2	01/23/90	1.200	0.41	9.50	23.13	35.24
2639	OZ7	MT2	01/23/90	1.192	0.37	8.06	21.52	33.78
2639	OZ1	MT2	01/24/90	1.254	0.20	6.75	32.84	57.81
2639	OZ6	MT2	01/26/90	1.313	0.21	7.67	34.33	59.70
2639	OZJ	MT2	01/30/90	0.922	0.20	> 10.00	> 49.76	> 65.24
2639	OZY	MT2	01/30/90	1.186	0.32	> 10.00	> 31.25	> 53.64
2639	OZB	MT2	01/30/90	0.874	0.28	> 10.00	> 36.31	> 63.05
2639	OZU	MT2	01/31/90	1.204	0.27	6.84	25.80	52.94
2639	OZM	MT2	02/01/90	1.234	0.14	> 10.00	> 68.99	> 70.37
2639	OZQ	MT2	02/01/90	1.249	0.28	> 10.00	> 35.83	> 57.84
2639	OZJ	MT2	02/06/90	1.114	0.47	7.14	15.17	43.66
2639	OZP	MT2	02/06/90	1.016	0.35	6.98	19.64	52.71
2639	OZK	MT2	02/07/90	1.177	0.59	10.00	16.95	42.37
2639	OZ3	MT2	02/07/90	1.181	1.34	> 10.00	> 7.35	> 36.31
2639	OZL	MT2	02/08/90	1.252	0.80	> 10.00	> 12.50	> 43.69
2639	OZU	MT2	02/08/90	1.279	0.81	> 10.00	> 12.28	> 43.89
2639	OZW	MT2	02/13/90	1.062	0.97	> 10.00	> 10.31	> 40.99
2639	OZJ	MT2	02/13/90	1.112	0.72	> 10.00	> 13.80	> 40.99
2639	OZB	MT2	02/14/90	1.041	0.44	> 10.00	> 22.57	> 51.62
2639	OZL	MT2	02/14/90	1.146	0.53	> 10.00	> 18.96	> 48.43
2639	OZL	MT2	02/20/90	1.200	0.54	> 10.00	> 18.38	> 47.26
2639	OZU	MT2	02/20/90	1.136	0.50	10.00	19.87	50.25
2639	OZM	MT2	02/27/90	1.112	0.86	7.35	8.57	36.36

## Cumulative Summary (cont'd)

AWB No.	Ship- ment	Pit Cell # Line	Test Date	Diff- mtl.	IC 50	TC 28	\$1	TAI
2439		1DE MT2	02/27/90	1.187	0.48	8.05	11.78	38.15
2439		1CS MT2	02/28/90	1.173	0.76	7.67	10.13	36.06
2439		1DS MT2	03/01/90	1.004	0.50	10.00	19.97	52.91
2439		1DK MT2	03/02/90	1.323	0.35	10.00	28.40	30.20
2439		1EQ MT2	03/04/90	1.160	0.64	10.00	15.72	44.40
2439		1DY MT2	03/04/90	1.233	0.88	10.00	11.32	41.16
2439		1E6 MT2	03/07/90	1.203	1.29	10.00	7.75	36.10
2439		1EA MT2	03/08/90	1.325	1.44	10.00	6.93	36.07
2439		1FD MT2	03/13/90	1.261	0.40	10.00	25.07	59.71
2439		1FG MT2	03/15/90	1.136	0.50	10.00	20.00	53.61
2439		1GD MT2	03/20/90	1.239	0.51	7.45	14.65	46.07
2439		1FZ MT2	03/20/90	1.054	0.49	10.00	20.57	50.75
2439		1GT MT2	03/21/90	1.051	0.60	6.74	11.19	38.37
2439		1GS MT2	03/28/90	1.288	0.58	6.82	11.76	41.47
2439		1HM MT2	03/28/90	1.347	0.56	7.24	13.00	42.17
2439		1HN MT2	04/04/90	1.263	0.86	5.83	6.74	27.04
2439		1HU MT2	04/10/90	1.022	0.86	10.00	11.62	40.33
2439		1I9 MT2	04/12/90	1.109	0.54	10.00	18.40	50.40
2439		1JH MT2	04/18/90	1.089	0.44	7.15	16.35	48.78
2439		1JU MT2	04/24/90	0.991	1.33	10.00	7.54	37.20
2439		1JK MT2	04/24/90	0.927	1.34	10.00	7.44	36.70
2439		1L6 MT2	05/02/90	1.141	0.46	10.00	21.62	55.22
2439		1KV MT2	05/02/90	1.166	0.51	10.00	19.81	51.33
2439		1L1 MT2	05/03/90	1.254	1.15	10.00	8.67	41.48
2439		1LC MT2	05/03/90	1.261	0.66	10.00	15.07	47.30
2439		1M2 MT2	05/08/90	1.051	0.50	10.00	20.08	54.21
2439		1LY MT2	05/09/90	1.088	0.53	10.00	18.90	46.93
2439		1LN MT2	05/09/90	1.079	0.53	10.00	18.88	49.53
2439		1MM MT2	05/10/90	1.022	0.48	10.00	20.95	50.32
2439		1LU MT2	05/10/90	0.905	1.07	9.27	8.68	38.02
2439		1LW MT2	05/10/90	1.004	1.15	8.51	7.38	35.01
2439		1MD MT2	05/10/90	0.825	0.50	10.00	20.03	49.76
2439		1M7 MT2	05/15/90	0.993	0.55	10.00	18.12	48.56
2439		1MS MT2	05/15/90	0.933	0.58	10.00	17.20	47.23
2439		1WF MT2	05/16/90	1.033	0.49	10.00	20.76	48.42
2439		1M1 MT2	05/16/90	1.075	0.47	10.00	21.05	52.25
2439		1OB MT2	05/22/90	1.037	0.46	10.00	21.82	59.71
2439		1OM MT2	05/24/90	1.261	0.97	10.00	10.31	44.59
2439		1O6 MT2	05/24/90	1.161	1.13	10.00	8.83	40.58
2439		1O1 MT2	05/24/90	1.192	1.17	10.00	8.52	41.48
2439		1OK MT2	05/30/90	1.063	0.58	8.59	14.78	42.94
2439		1OE MT2	05/30/90	1.022	0.56	8.87	15.95	43.34
2439		1PB MT2	06/05/90	0.948	1.02	10.00	9.77	45.58
2439		1PE MT2	06/06/90	1.004	1.11	10.00	9.00	41.18
2439		1PG MT2	06/06/90	0.986	1.13	10.00	8.83	40.98
2439		1PE MT2	06/06/90	1.017	1.18	10.00	8.69	40.18
2439		1PM MT2	06/07/90	1.118	0.42	9.68	22.94	51.04
2439		1PT MT2	06/12/90	0.932	0.45	10.00	22.31	59.64
2439		1QA MT2	06/26/90	0.936	0.58	9.76	16.84	42.46
2439		1QH MT2	06/27/90	1.077	0.48	10.00	20.76	59.01
2439		1QE MT2	06/27/90	1.050	0.57	7.73	13.67	38.49
2439		1QD MT2	06/28/90	1.186	0.66	10.00	15.27	45.10
2439		1QB MT2	06/28/90	0.981	1.50	10.00	6.65	39.08
2439		1RD MT2	07/03/90	1.008	1.07	10.00	9.36	46.99
2439		1RQ MT2	07/03/90	1.188	0.67	10.00	14.90	45.33
2439		1S3 MT2	07/11/90	1.086	0.45	9.76	21.86	49.36
2439		1RY MT2	07/12/90	1.514	0.61	6.35	10.38	38.32
2439		1SO MT2	07/17/90	1.128	0.56	10.00	17.99	49.19
2439		1SR MT2	07/17/90	1.114	0.55	10.00	18.15	49.49
2439		1SK MT2	07/17/90	1.068	0.55	10.00	18.14	49.49
2439		1ST MT2	07/17/90	1.075	0.56	10.00	17.99	49.49
2439		1SF MT2	07/17/90	1.071	0.58	10.00	17.23	48.49
2439		1TB MT2	07/18/90	1.063	0.45	10.00	22.17	49.44
2439		1TS MT2	07/18/90	1.104	0.44	10.00	22.96	60.51
2439		1U5 MT2	07/24/90	1.281	0.58	8.41	14.59	47.72
2439		1UG MT2	07/25/90	1.239	0.47	10.00	21.04	43.91
2439		1VG MT2	07/26/90	1.278	1.52	9.74	6.61	32.09
2439		1X7 MT2	07/26/90	1.223	1.19	10.00	8.37	42.78
2439		1WP MT2	07/26/90	1.196	0.70	10.00	14.20	48.19
2439		1WU MT2	07/31/90	1.289	1.64	10.00	6.10	33.37
2439		1YD MT2	07/31/90	1.084	3.93	10.00	2.54	18.44
2439		1WM MT2	08/01/90	1.304	1.25	10.00	7.98	40.08
2439		1X1 MT2	08/02/90	1.264	1.60	10.00	6.26	34.07
2439		1X3 MT2	08/07/90	1.151	1.05	10.00	9.56	41.68
2439		1ZJ MT2	08/07/90	1.244	0.53	10.00	18.83	50.72
2439		1XT MT2	08/07/90	1.139	0.53	5.64	10.68	42.28
2439		1YK MT2	08/08/90	1.305	0.80	10.00	12.45	44.29
2439		1ZC MT2	08/09/90	1.297	0.59	10.00	16.96	48.60

## CUMULATIVE SUMMARY (cont'd)

AVB No.	Ship- ment	Pit Cell #	Date	Diff- mml.	IC 50	TC 25	SI	TAT
2639	124	MT2	08/09/90	1.161	0.70 >	10.00 >	16.30 >	64.59
2639	228	MT2	08/14/90	1.270	0.43 >	10.00 >	15.77 >	64.50
2639	210	MT2	08/14/90	1.298	1.77 >	10.00 >	5.63 >	25.99
2639	216	MT2	08/15/90	1.312	0.48	6.82	14.18 >	63.50
2639	20P	MT2	08/15/90	1.317	1.60 >	10.00 >	6.26 >	33.77
2639	208	MT2	08/15/90	1.303	1.63 >	10.00 >	6.16 >	33.84
2639	210	MT2	08/16/90	1.356	1.11 >	10.00 >	8.56 >	37.31
2639	211	MT2	08/16/90	1.264	1.59 >	10.00 >	6.50 >	36.17
2639	244	MT2	08/21/90	1.179	0.63 >	10.00 >	5.79 >	67.10
2639	226	MT2	08/21/90	1.129	1.47 >	10.00 >	6.98 >	36.27
2639	24A	MT2	08/22/90	1.117	0.51 >	10.00 >	19.64 >	64.35
2639	233	MT2	08/22/90	1.204	1.27 >	10.00 >	7.87 >	40.58
2639	22Y	MT2	08/22/90	1.103	0.51 >	10.00 >	19.64 >	69.54
2639	241	MT2	08/23/90	1.127	0.49	6.67	13.72 >	63.42
2639	23V	MT2	08/23/90	1.193	0.47	9.50	20.50 >	52.65
2639	23F	MT2	08/23/90	1.140	0.49	7.06	14.53 >	55.79
2639	26C	MT2	08/23/90	1.186	0.45	9.50	20.95 >	54.05
2639	24G	MT2	08/23/90	1.134	0.49	6.60	13.58 >	43.26
2639	251	MT2	08/29/90	1.329	0.51	6.82	13.28 >	42.63
2639	25A	MT2	08/29/90	1.333	0.52	6.67	12.92 >	40.66
2639	25W	MT2	08/30/90	1.357	0.66	3.90	8.97	33.58
2639	25K	MT2	08/30/90	1.497	0.62	3.86	9.40	33.53
2639	27Y	MT2	08/30/90	1.225	1.46 >	10.00 >	6.86 >	33.07
2639	29A	MT2	09/04/90	1.297	1.69 >	10.00 >	5.91 >	33.46
2639	26V	MT2	09/05/90	1.197	1.11	8.51	7.66 >	37.54
2639	29U	MT2	09/05/90	1.313	0.16 >	10.00 >	69.32 >	68.80
2639	29S	MT2	09/05/90	1.376	0.39 >	10.00 >	25.45 >	55.56
2639	28F	MT2	09/06/90	1.111	0.48	7.92	16.60 >	67.86
2639	24G	MT2	09/12/90	1.013	0.51 >	10.00 >	19.55 >	51.52
2639	29G	MT2	09/12/90	1.053	0.51 >	10.00 >	19.55 >	52.31
2639	2AF	MT2	09/13/90	1.114	0.57 >	10.00 >	17.54 >	64.53
2639	29I	MT2	09/13/90	1.169	0.58 >	10.00 >	17.13 >	65.83
2639	281	MT2	09/13/90	1.025	1.85 >	10.00 >	5.39 >	27.96
2639	20D	MT2	09/25/90	0.955	0.04	6.41	152.66 >	69.26
2639	204	MT2	09/26/90	0.663	0.08	5.20	65.31 >	68.37
2639	2EC	MT2	09/27/90	0.916	0.16 >	10.00 >	62.34 >	64.81
2639	2FV	MT2	09/28/90	1.052	0.08	5.29	62.79 >	58.49
2639	28K	MT2	10/02/90	0.516	< 0.03	5.01 >	156.67 >	66.19
2639	21W	MT2	10/04/90	0.847	< 0.03	0.59 >	18.50 >	36.19
2639	2L0	MT2	10/09/90	0.340	0.28	4.38	15.63 >	37.82
2639	28S	MT2	10/10/90	0.728	0.05 <	0.03 <	0.67 >	30.45
2639	29S	MT2	10/12/90	0.608	< 0.03	1.98 >	62.01 >	51.93
2639	29M	MT2	10/17/90	0.632	< 0.03	7.22 >	225.57 >	82.65
2639	28X	MT2	10/18/90	0.873	< 0.03	2.08 >	64.95 >	60.32
2639	214	MT2	10/23/90	0.952	0.05	4.94	93.50 >	66.19
2639	271	MT2	10/23/90	1.021	0.04	5.36	121.73 >	69.83
2639	29Q	MT2	10/26/90	0.876	< 0.03	5.86 >	183.15 >	76.58
2639	2XH	MT2	10/30/90	1.073	0.11	4.15	38.86 >	58.57
2639	220	MT2	11/01/90	1.205	0.09	2.15	24.24 >	68.40
2639	289	MT2	11/02/90	1.178	< 0.03	2.38 >	64.95 >	56.14
2639	24D	MT2	11/06/90	1.212	0.12	3.04	26.33 >	55.63
2639	271	MT2	11/07/90	1.204	0.12	2.50	20.90 >	53.80
2639	30W	MT2	11/08/90	1.156	0.05	4.42	84.56 >	69.80
2639	32T	MT2	11/09/90	1.152	0.08	4.33	52.64 >	60.34
2639	34G	MT2	11/13/90	1.182	0.06	2.51	62.39 >	55.43
2639	35G	MT2	11/14/90	0.762	0.05 >	10.00 >	134.91 >	72.69
2639	36E	MT2	11/20/90	0.893	< 0.03	8.87 >	277.08 >	90.98
2639	37W	MT2	11/21/90	0.702	0.05	9.58	190.91 >	80.51
2639	37Q	MT2	11/27/90	0.905	< 0.03	0.02 >	0.61 >	81.12
2639	38U	MT2	11/29/90	1.088	< 0.03	0.02 >	0.49	37.13
2639	39Y	MT2	11/30/90	1.204	0.04	1.00	25.65 >	50.84
2639	38J	MT2	12/06/90	0.669	0.04 >	10.00 >	284.76 >	77.04
2639	32G	MT2	12/11/90	1.067	0.08	8.06	95.83 >	70.58
2639	32C	MT2	12/12/90	1.007	0.09	4.66	102.75 >	69.71
2639	34D	MT2	12/12/90	0.920	0.05	4.36	99.52 >	72.00
2639	34F	MT2	12/13/90	1.031	0.05	1.70	35.10 >	51.00
2639	37S	MT2	12/20/90	0.461	0.13 >	10.00 >	78.66 >	71.61
2639	34O	MT2	01/08/91	1.222	0.11	5.29	47.61 >	63.81
2639	31O	MT2	01/09/91	1.353	0.17	3.72	22.56 >	56.65
2639	30N	MT2	01/11/91	1.389	0.06	1.07	16.83	62.31
2639	3M1	MT2	01/17/91	1.176	0.27	2.26	8.22	36.42
2639	3M4	MT2	01/14/91	1.438	0.18	1.73	9.76 >	34.37
2639	301	MT2	01/21/91	1.423	0.13	5.12	38.15 >	61.36
2639	43Z	MT2	01/22/91	1.259	0.13	0.67	3.25 >	61.26
2639	44P	MT2	01/22/91	1.106	0.17	0.71	5.62 >	45.35
2639	320	MT2	01/23/91	1.318	0.13	2.04	15.56 >	62.65
2639	463	MT2	01/24/91	1.354	0.18	1.87	10.58 >	37.96
2639	31T	MT2	01/24/91	1.268	0.17	2.26	13.29 >	61.81

## Cumulative Summary (cont'd)

AVS	Ship- No.	Pkt #	Cell Line	Test Date	Diff- mtl.	IC 5G	TC 25	SI	TAI
2639		3X8	MT2	01/25/91	0.993	0.20	1.53	7.59 >	28.09
2639		46X	MT2	01/29/91	1.390	0.15	1.93	12.78	38.81
2639		481	MT2	01/31/91	1.465	0.09	1.90	20.81	43.02
2639		495	MT2	02/05/91	1.134	0.12	1.73	14.76	65.64
2639		445	MT2	02/08/91	1.384	0.06	1.29	22.56	39.36
2639		4C8	MT2	02/20/91	1.454	0.07	1.24	18.40 >	44.33
2639		4CX	MT2	02/21/91	1.359	0.13	2.96	23.60 >	54.07
2639		4DL	MT2	02/22/91	1.325	0.15	9.74	63.71 >	69.09
2643	21	06A	MT2	12/21/88	1.094	0.00 >	100.00	0.00 >	6.51
2643	68	1YU	CEN	08/02/90	0.882	0.00 >	100.00	0.00 >	3.94
2657	65	1YT	CEN	05/16/90	1.420	0.00 >	100.00	0.00 >	0.02
2657	68	24V	CEN	08/21/90	0.758	0.00 >	100.00	0.00 >	0.00
2657	65	1MW	MT2	05/15/90	0.968	0.00 >	100.00	0.00 >	11.40
2657	68	1W1	MT2	08/01/90	1.237	0.00 >	100.00	0.00 >	0.88
2670	21	06A	MT2	12/21/88	1.094	0.00 >	103.00	0.00 >	7.21
2737		04Z	MT2	01/16/89	0.945	0.00 >	499.00	0.00 >	5.43
2738	65	1WQ	MT2	05/15/90	1.006	0.00 >	100.00	0.00 >	9.49
2716	66	06W	MT2	08/03/89	1.055	0.00 >	1.61	0.00 >	0.00
2720	65	1WQ	MT2	05/15/90	1.006	0.00 >	100.00	0.00 >	5.00
2728	22	02Z	MT2	10/12/89	1.354	0.00 >	8.87	0.00 >	4.21
2812	61	10B	MT2	10/31/89	1.405	0.00 <	0.32	0.00 >	0.00
2812	51	148	MT2	12/05/89	1.340	0.00 >	0.01	0.00 >	0.00
2875	31	0FF	MT2	09/09/89	1.217	0.00 >	92.00	0.00 >	0.11
2882	21	048	MT2	12/21/88	1.161	0.00 >	100.00	0.00 >	6.11
2893	26	048	MT2	12/21/88	1.161	0.00 >	43.50	0.00 >	7.13
2906	53	01W	MT2	05/24/89	1.593	0.00 >	6.35	0.00 >	0.00
2921	68	21Y	CEN	08/14/90	1.013	36.80 >	100.00 >	2.58 >	18.74
2921	65	1YT	MT2	05/15/90	1.096	17.60 >	100.00 >	5.67 >	35.99
2921	68	1W1	MT2	08/01/90	1.237	43.10 >	100.00 >	2.32 >	19.65
2922	68	24V	CEN	08/21/90	0.758	0.00 >	100.00	0.00 >	5.26
2922	65	1YT	MT2	05/13/90	1.096	55.00 >	100.00 >	1.82 >	18.16
2922	68	1W1	MT2	08/01/90	1.287	55.40 >	100.00 >	1.80 >	14.95
2967	27	04C	MT2	12/21/88	1.049	0.00 >	49.30	0.00 >	6.11
2973	27	04C	MT2	12/21/88	1.049	0.00 >	49.70	0.00 >	6.80
2992	46	081	MT2	08/08/89	1.139	0.00 >	100.00	0.00 >	2.10
2994	53	1-1M	MT2	05/24/89	1.537	0.00 >	3.20	0.00 >	0.00
3038	53	01W	MT2	05/24/89	1.537	0.00 <	0.32	0.00 >	0.00
3038	53	102	MT2	11/25/89	1.320	0.00 >	0.02	0.00 >	0.84
3222	65	1MW	CEN	05/14/90	1.177	0.00 >	4.95	0.00 >	2.60
3258	65	1WU	CEN	05/16/90	1.572	0.00 >	12.20	0.00 >	0.00
3258	65	1W2	MT2	05/15/90	1.021	0.00 >	19.39	0.00 >	1.20
3260	65	1WV	CEN	05/16/90	1.300	0.00 >	13.00	0.00 >	0.00
3260	65	1W2	MT2	05/15/90	1.021	0.00 >	49.00	0.00 >	3.80
3278	65	1WV	CEN	05/16/90	1.300	0.00 >	19.20	0.00 >	2.50
3278	65	1W0	MT2	05/15/90	0.987	0.00 >	49.90	0.00 >	10.48
3284	65	1WU	CEN	05/16/90	1.177	0.00 >	16.10	0.00 >	1.31
3284	65	1W8	MT2	05/15/90	0.988	0.00 >	16.90	0.00 >	1.60
3322	35	1W8	MT2	05/15/90	0.988	0.00 >	4.90	0.00 >	1.60
3350	31	040	MT2	12/21/88	0.924	0.00 >	5.70	0.00 >	0.00
3352	31	040	MT2	12/21/88	0.924	0.00 >	5.32	0.00 >	0.59
3356	61	1W1	MT2	10/31/89	1.405	0.00 >	2.77	0.00 >	0.00
3361	65	1W1	CEN	05/16/90	1.288	0.00 >	3.20	0.00 >	0.00
3361	65	1W9	MT2	05/15/90	0.874	0.00 >	3.09	0.00 >	0.00
3362	74	34U	CEN	11/13/90	0.829	0.00 >	100.00	0.00 >	1.25
3362	75	380	CEN	12/06/90	0.574	92.40 >	100.00 >	1.08 >	23.58
3362	74	34C	MT2	11/13/90	1.153	0.00 >	100.00	0.00 >	0.00
3374	65	101	CEN	05/16/90	1.288	0.00 >	100.00	0.00 >	6.89
3374	74	34X	CEN	11/13/90	0.827	0.00 >	100.00	0.00 >	3.25
3374	75	380	CEN	12/06/90	0.574	12.90 >	100.00 >	7.77 >	42.90
3374	65	1W9	MT2	05/15/90	0.874	41.60 >	100.00 >	2.40 >	23.55
3374	74	340	MT2	11/13/90	1.129	0.00 >	100.00	0.00 >	7.54
3377	65	1WY	CEN	05/16/90	1.588	0.00 >	14.10	0.00 >	0.00
3377	65	1W4	MT2	05/15/90	0.940	0.00 >	73.50	0.00 >	3.90
3378	65	1WY	CEN	05/16/90	1.588	0.00 >	10.30	0.00 >	0.00
3378	65	1W4	MT2	05/15/90	0.940	0.00 >	15.70	0.00 >	3.81
3384	31	04E	MT2	12/21/88	1.027	0.00 >	18.30	0.00 >	2.80
3385	31	04E	MT2	12/21/88	1.027	100.00 >	97.40	0.97 >	49.87
3397	65	1W2	CEN	05/16/90	1.443	0.00 >	1.62	0.00 >	4.11
3397	65	1W6	MT2	05/15/90	1.021	0.00 >	2.23	0.00 >	0.00
3491	65	1W2	CEN	05/16/90	1.443	0.00 >	100.00	0.00 >	3.10
3491	68	24W	CEN	08/21/90	0.782	0.00 >	95.10	0.00 >	1.02
3491	68	1W1	MT2	08/01/90	1.287	0.00 >	100.00	0.00 >	2.99
3513	53	010	MT2	05/24/89	1.591	0.00 >	72.40	0.00 >	0.31
3524	65	100	CEN	05/16/90	1.307	0.00 >	100.00	0.00 >	0.02
3524	65	1W8	MT2	05/15/90	1.021	0.00 >	20.20	0.00 >	6.76
3547	74	34U	CEN	11/13/90	0.827	0.00 >	18.50	0.00 >	0.00
3547	65	4C0	CEN	02/20/91	0.722	0.00 >	51.90	0.00 >	0.00
3547	74	340	MT2	11/13/90	1.129	0.00 >	5.30	0.00 >	0.00

## Cumulative Summary (cont'd)

Ave No.	Ship-ment	Pt#	Cell Line	Test Date	Diff- mtl.	IC 50	TC 25	SI	TAI
3547	65	4CE	WT2	02/20/91	1.473	0.00	20.80	0.00	0.00
3560	51	04F	WT2	12/21/88	0.982	0.00	> 100.00	0.00	> 4.35
3580	67	1UF	WT2	07/24/90	1.261	0.00	< 0.32	0.00	0.00
3580	67	21K	WT2	08/16/90	1.321	0.00	< 0.32	0.00	0.30
3592	65	1WJ	CEM	05/10/90	1.084	< 0.32	> 95.00	> 296.76	> 84.34
3592	51	0FF	WT2	05/09/89	1.217	0.00	> 91.10	0.00	> 3.82
3592	61	10E	WT2	10/31/89	0.753	23.50	> 97.60	4.15	> 32.83
3592	65	1JJ	WT2	04/18/90	1.030	0.00	> 49.00	0.00	> 7.54
3592	65	1MM	WT2	05/10/90	1.157	0.00	> 97.20	0.00	> 8.51
3606	29	04F	WT2	12/21/88	0.982	0.00	> 100.00	0.00	0.00
3611	67	24W	CEM	08/21/90	0.782	0.00	> 100.00	0.00	1.00
3611	67	1UW	WT2	07/25/90	1.193	0.00	> 100.00	0.00	> 3.80
3602	67	1UW	WT2	07/25/90	1.193	0.00	< 0.32	0.00	0.00
3602	67	21L	WT2	08/16/90	1.274	0.00	< 0.38	0.00	0.00
3696	65	10G	CEM	05/16/90	1.307	0.00	> 74.70	0.00	> 1.45
3696	65	1NC	WT2	05/15/90	1.047	0.00	> 100.00	0.00	> 2.20
3908	74	34Y	CEM	11/13/90	0.762	0.00	> 51.10	0.00	> 6.91
3908	65	1NC	WT2	05/15/90	1.047	0.00	> 79.10	0.00	> 0.28
3908	74	34E	WT2	11/13/90	1.133	0.00	> 61.50	0.00	0.00
3935	74	34Y	CEM	11/13/90	0.762	0.00	> 32.90	0.00	> 3.40
3935	65	1MD	WT2	05/15/90	1.104	0.00	> 49.30	0.00	> 3.10
3935	74	34E	WT2	11/13/90	1.133	0.00	> 23.90	0.00	0.00
3939	53	01O	WT2	05/24/89	1.591	0.00	> 14.70	0.00	0.00
3966	53	01P	WT2	05/24/89	1.672	0.00	> 2.18	0.00	0.00
3980	36	03D	WT2	12/01/88	1.993	0.00	> 15.70	0.00	0.00
3981	36	03E	WT2	12/01/88	2.023	0.00	> 100.00	0.00	> 10.82
3982	36	03E	WT2	12/01/88	2.023	0.00	> 100.00	0.00	> 0.23
3983	36	03F	WT2	12/01/88	1.946	0.00	> 100.00	0.00	> 8.61
3984	36	03F	WT2	12/01/88	1.946	0.00	> 100.00	0.00	> 11.11
3985	36	03G	WT2	12/01/88	1.966	0.00	> 100.00	0.00	> 6.42
3986	36	03G	WT2	12/01/88	1.966	0.00	> 100.00	0.00	> 2.58
3987	36	03H	WT2	12/01/88	1.785	0.00	> 100.00	0.00	> 12.12
3988	36	03H	WT2	12/01/88	1.785	0.00	> 53.80	0.00	> 6.10
3989	34	03I	WT2	12/01/88	1.787	0.00	> 100.00	0.00	> 0.55
3990	36	03I	WT2	12/01/88	1.787	0.00	> 33.20	0.00	0.00
3991	36	03J	WT2	12/01/88	1.872	0.00	> 100.00	0.00	0.00
3992	34	03J	WT2	12/01/88	1.872	0.00	> 100.00	0.00	> 8.51
3993	36	03K	WT2	12/01/88	1.657	0.00	> 100.00	0.00	> 15.71
3994	36	03K	WT2	12/01/88	1.657	0.00	> 100.00	0.00	> 2.30
3995	34	03L	WT2	12/01/88	1.801	0.00	> 100.00	0.00	> 0.31
3996	36	03L	WT2	12/01/88	1.801	0.00	> 17.10	0.00	> 2.04
3997	36	03M	WT2	12/01/88	2.002	0.00	> 17.50	0.00	> 0.28
3998	34	03M	WT2	12/01/88	2.002	0.00	> 0.53	0.00	0.00
3999	36	03O	WT2	12/01/88	1.576	0.00	> 1.03	0.00	> 0.06
4000	36	03O	WT2	12/01/88	1.876	0.00	> 100.00	0.00	> 1.59
4001	34	03P	WT2	12/01/88	1.916	0.00	> 100.00	0.00	> 1.12
4002	36	03P	WT2	12/01/88	1.916	0.00	> 100.00	0.00	> 12.12
4003	36	03Q	WT2	12/01/88	1.837	0.00	> 100.00	0.00	0.00
4004	36	03R	WT2	12/01/88	1.837	0.00	> 100.00	0.00	> 0.60
4005	36	03R	WT2	12/01/88	1.963	0.00	> 53.40	0.00	0.00
4006	36	03R	WT2	12/01/88	1.963	0.00	> 54.70	0.00	0.00
4021	34	03S	WT2	12/01/88	1.906	0.00	> 49.90	0.00	> 0.21
4022	36	03S	WT2	12/01/88	1.906	0.00	> 48.00	0.00	0.00
4023	36	03T	WT2	12/01/88	1.902	0.00	> 52.90	0.00	0.00
4024	36	03T	WT2	12/01/88	1.902	0.00	> 37.80	0.00	> 0.38
4025	36	03U	WT2	12/01/88	1.929	0.00	> 76.50	0.00	> 0.20
4026	36	03A	WT2	02/23/89	1.092	0.00	> 0.00	0.00	0.00
4027	34	03U	WT2	12/01/88	1.929	0.00	< 0.32	0.00	0.00
4028	34	04G	WT2	12/21/88	1.015	0.00	> 51.40	0.00	> 1.50
4029	36	03V	WT2	12/01/88	1.816	0.00	> 100.00	0.00	> 0.00
4030	34	03V	WT2	12/01/88	1.816	0.00	> 39.30	0.00	> 3.85
4031	36	03W	WT2	12/01/88	1.924	0.00	> 14.60	0.00	> 4.76
4032	36	24X	CEM	08/21/90	0.762	0.00	> 24.40	0.00	0.00
4032	34	03W	WT2	12/01/88	1.924	< 1.29	> 100.00	> 2.43	> 18.07
4032	36	03O	WT2	08/01/89	1.222	20.20	> 100.00	> 4.95	> 28.80
4032	65	1MD	WT2	05/15/90	1.104	17.50	> 100.00	> 5.70	> 28.87
4032	68	1MK	WT2	06/01/90	1.255	17.60	> 100.00	> 5.68	> 27.19
4033	36	03X	WT2	12/01/88	1.853	0.00	> 100.00	0.00	> 7.70
4034	36	03X	WT2	12/01/88	1.853	0.00	> 100.00	0.00	> 2.80
4035	34	03Y	WT2	12/01/88	1.902	3.96	> 100.00	> 25.30	> 58.82
4035	36	03O	WT2	08/01/89	1.222	0.77	> 100.00	> 129.56	> 81.86
4035	65	1ME	WT2	05/15/90	1.066	1.55	> 100.00	> 64.65	> 75.73
4036	68	22R	CEM	08/21/90	1.043	26.90	> 100.00	> 3.71	> 19.07
4036	68	24X	CEM	08/21/90	0.762	19.80	> 100.00	> 5.04	> 22.69
4036	65	4CB	CEM	02/20/91	0.779	16.00	> 58.30	> 3.64	> 18.43
4036	36	03Y	WT2	12/01/88	1.902	15.10	> 95.00	> 6.29	> 32.12
4036	34	03I	WT2	08/01/89	1.195	8.01	> 100.00	> 12.48	> 39.13
4036	68	1MK	WT2	08/01/90	1.255	12.90	> 100.00	> 7.75	> 42.38

## Cumulative Summary (cont'd)

AVN	Ship-	Plt Cell	Test	Diff-	IC 50	TC 25	S1	TAI
No.	ment	# Line	Date	mtic.				
4036	45	4CF MT2	02/20/91	1.356	16.30	7.91	0.35	9.01
4037	36	032 MT2	12/01/88	1.576	0.00	> 100.00	0.00	6.91
4038	36	332 MT2	12/01/88	1.576	0.00	> 100.00	0.00	3.54
4039	36	040 MT2	12/01/88	1.420	0.00	25.40	0.00	0.33
4040	36	040 MT2	12/01/88	1.420	0.00	> 100.00	0.00	2.19
4041	36	041 MT2	12/01/88	1.407	0.00	> 100.00	0.00	18.89
4048	37	028 MT2	11/22/88	1.720	0.00	0.41	0.00	0.00
4048	37	046 MT2	12/21/88	1.015	0.00	< 0.32	0.00	0.00
4051	67	1UI MT2	07/25/90	1.315	0.00	1.55	0.00	3.03
4062	36	041 MT2	12/01/88	1.407	0.00	> 100.00	0.00	0.20
4065	25	04X MT2	12/21/88	0.985	0.00	< 0.32	0.00	0.00
4070	35	04X MT2	12/21/88	0.985	0.00	< 0.32	0.00	0.00
4075	1A	04Z CEM	03/28/89	1.163	16.10	> 100.00	> 7.09	> 35.77
4075	68	24Y CEM	08/21/90	0.764	12.30	> 100.00	> 8.11	> 50.38
4075	65	4CB CEM	02/20/91	0.779	3.73	> 100.00	> 26.84	> 49.66
4075	46	081 MT2	06/08/89	1.139	58.80	> 100.00	> 1.70	> 14.91
4075	68	18L MT2	08/01/90	1.292	79.60	> 100.00	> 1.26	> 9.22
4075	65	4CF MT2	02/20/91	1.356	1.45	36.40	> 25.13	> 44.22
4084	37	041 MT2	12/21/88	1.114	0.00	1.77	0.00	> 0.12
4097	37	08A MT2	02/23/89	1.092	0.00	> 0.00	0.00	0.00
4098	37	08B MT2	02/23/89	1.171	0.00	> 0.00	0.00	0.00
4099	37	08B MT2	02/23/89	1.171	0.00	> 0.00	0.00	> 5.99
4106	37	08C MT2	02/23/89	1.093	0.00	< 0.00	0.00	0.00
4107	37	08C MT2	02/23/89	1.093	0.00	> 0.03	0.00	0.00
4133	65	1HE MT2	05/15/90	1.066	0.00	> 100.00	0.00	> 0.42
4134	65	1VR CEM	07/24/90	0.847	0.00	> 100.00	0.00	0.48
4134	65	22P CEM	08/15/90	1.025	0.00	> 100.00	0.00	0.12
4134	65	1HG MT2	05/16/90	1.143	0.00	> 100.00	0.00	> 8.39
4148	65	1HG MT2	05/16/90	1.143	32.00	59.20	1.85	> 19.76
4156	65	1HH MT2	05/16/90	1.039	0.00	> 100.00	0.00	> 5.11
4159	65	1VH CEM	07/24/90	0.847	0.00	> 100.00	0.00	0.00
4159	65	22D CEM	08/15/90	1.025	0.00	90.60	0.00	> 1.38
4159	65	1HH MT2	05/16/90	1.039	0.00	> 100.00	0.00	> 5.10
4172	65	27G CEM	08/15/90	1.025	0.00	> 100.00	0.00	> 0.29
4172	61	087 MT2	CE/GB/89	1.262	0.00	> 100.00	0.00	> 4.90
4179	65	207 CEM	08/07/90	1.122	0.00	> 100.00	0.00	> 2.23
4179	65	181 MT2	05/16/90	1.152	0.00	> 100.00	0.00	> 8.77
4225	51	0FQ MT2	05/09/89	1.297	0.00	23.00	0.00	> 1.50
4228	84	042 MT2	05/16/89	1.308	0.00	> 100.00	0.00	> 3.90
4240	53	01P MT2	05/24/89	1.672	0.00	5.02	0.00	> 0.02
4261	46	07A MT2	02/15/89	0.520	0.00	16.30	0.00	> 18.20
4261	46	082 MT2	08/08/89	1.242	0.00	16.00	0.00	0.00
4251	65	24Y CEM	08/21/90	0.764	0.00	19.50	0.00	> 4.08
4251	65	1HI MT2	05/16/90	1.152	0.00	0.49	0.00	0.00
4251	65	178 MT2	07/18/90	1.286	0.00	> 1.00	0.00	> 5.00
4277	74	34Z CEM	11/13/90	0.769	0.00	45.10	0.00	0.00
4277	65	1HJ MT2	05/16/90	1.095	0.00	16.10	0.00	> 1.20
4277	76	34F MT2	11/13/90	1.181	0.00	50.00	0.00	0.00
4278	61	028 MT2	10/31/89	1.326	0.00	5.81	0.00	0.67
4278	61	106 MT2	02/27/90	1.204	0.00	> 1.00	0.00	0.00
4281	61	02R MT2	10/31/89	1.326	0.00	2.04	0.00	0.00
4281	61	168 MT2	12/05/89	1.340	0.00	> 1.00	0.00	1.52
4282	84	0DF MT2	04/21/89	1.322	0.00	< 0.32	0.00	0.00
4282	84	0FV MT2	05/11/89	1.268	0.00	49.40	0.00	> 3.40
4283	84	0FV MT2	05/11/89	1.217	0.00	6.53	0.00	0.00
4286	84	0FW MT2	05/11/89	1.217	0.00	42.10	0.00	> 0.30
4287	84	042 MT2	05/16/89	1.308	0.00	31.20	0.00	0.00
4342	74	34Z CEM	11/13/90	0.769	0.00	6.71	0.00	0.00
4342	65	1WJ MT2	05/16/90	1.095	0.00	6.18	0.00	> 2.98
4342	74	34F MT2	11/13/90	1.151	0.00	5.05	0.00	0.15
4357	65	1MK MT2	05/16/90	1.098	0.52	16.10	30.97	> 51.81
4397	68	22T CEM	08/15/90	0.961	0.00	> 100.00	0.00	> 8.09
4397	65	4CB CEM	02/20/91	0.726	0.00	> 100.00	0.00	> 1.82
4397	68	1HJ MT2	08/01/90	1.292	0.00	53.80	0.00	> 1.20
4397	65	4CG MT2	02/20/91	1.359	0.00	> 100.00	0.00	> 0.32
4453	45	02E MT2	11/22/88	1.720	0.00	7.56	0.00	> 1.13
4454	45	02F MT2	11/22/88	1.786	0.00	5.56	0.00	> 0.36
4455	45	02F MT2	11/22/88	1.786	0.00	60.80	0.00	> 0.54
4456	45	02G MT2	11/22/88	1.820	0.00	15.90	0.00	> 0.45
4457	45	02G MT2	11/22/88	1.820	0.00	56.80	0.00	> 0.55
4458	45	02H MT2	11/22/88	1.673	0.00	6.87	0.00	> 0.90
4459	45	02H MT2	11/22/88	1.673	0.00	73.50	0.00	> 0.60
4460	45	02I MT2	11/22/88	1.725	0.00	6.94	0.00	> 0.31
4461	45	02I MT2	11/22/88	1.725	0.00	20.00	0.00	> 0.60
4462	45	02J MT2	11/22/88	1.620	0.00	69.90	0.00	> 0.91
4463	45	02J MT2	11/22/88	1.620	0.00	16.50	0.00	> 0.00
4464	45	02K MT2	11/22/88	1.815	0.00	< 0.32	0.00	0.00
4465	45	02K MT2	11/22/88	1.815	0.00	> 100.00	0.00	> 1.10

## Cumulative Summary (cont'd)

AVB No.	Ship- ment	Pkt Cell # Line	Test Date	Dif- mili.	TC 50	TC 25	\$1	TAT
4460 45		02L MT2	11/22/88	1.672	0.00	2.57	0.00 >	1.07
4468 45		02L MT2	11/22/88	1.672	0.00 > 100.00	0.00 >		2.10
4469 45		02M MT2	11/22/88	1.633	0.00 > 100.00	0.00 >		0.00
4470 45		02M MT2	11/22/88	1.633	0.00 > 2.51	0.00 >		0.01
4471 45		02M MT2	11/22/88	1.762	0.00 > 4.99	0.00 >		3.53
4472 45		02M MT2	11/22/88	1.762	0.00 > 100.00	0.00 >		0.30
4473 45		022 MT2	11/22/88	1.501	0.00 > 100.00	0.00 >		1.30
4474 45		022 MT2	11/22/88	1.801	0.00 > 100.00	0.00 >		0.60
4475 45		023 MT2	11/22/88	1.840	0.00 > 100.00	0.00 >		1.10
4476 45		023 MT2	11/22/88	1.840	0.00 > 100.00	0.00 >		0.00
4477 68	1YU CEM		08/02/90	0.882	0.00 > 15.50	0.00 >		4.89
4477 45		024 MT2	11/22/88	1.768	0.00 > 6.24	0.00 >		0.00
4478 45		024 MT2	11/22/88	1.768	0.00 > 35.00	0.00 >		0.00
4479 45		025 MT2	11/22/88	1.787	0.00 > 50.50	0.00 >		0.00
4480 45		025 MT2	11/22/88	1.787	0.00 > 100.00	0.00 >		3.98
4481 45		026 MT2	11/22/88	1.771	0.00 > 0.57	0.00 >		0.00
4482 45		026 MT2	11/22/88	1.771	0.00 > 7.25	0.00 >		0.00
4483 45		027 MT2	11/22/88	1.914	0.00 > 17.10	0.00 >		0.50
4484 45		027 MT2	11/22/88	1.914	0.00 > 5.53	0.00 >		0.00
4485 45		028 MT2	11/22/88	1.832	0.00 > 100.00	0.00 >		0.00
4486 45		028 MT2	11/22/88	1.832	0.00 > 50.10	0.00 >		0.58
4487 45		029 MT2	11/22/88	1.947	0.00 > 100.00	0.00 >		0.88
4488 45		029 MT2	11/22/88	1.947	0.00 > 1.49	0.00 >		0.00
4489 45		02A MT2	11/22/88	1.936	0.00 > 0.44	0.00 >		0.00
4490 45		020 MT2	11/22/88	1.821	0.00 > 4.40	0.00 >		0.00
4491 45		020 MT2	11/22/88	1.821	0.00 > 5.66	0.00 >		0.50
4494 45		022 MT2	11/29/88	1.811	0.00 > 6.14	0.00 >		1.91
4495 45		022 MT2	11/29/88	1.811	0.00 > 0.93	0.00 >		0.10
4496 45		025 MT2	11/29/88	1.839	0.00 > 5.30	0.00 >		7.21
4497 45		025 MT2	11/29/88	1.839	0.00 > 100.00	0.00 >		5.00
4498 45		027 MT2	11/29/88	1.865	0.00 < 0.32	0.00 >		0.00
4499 45		027 MT2	11/29/88	1.865	0.00 < 0.32	0.00 >		0.00
4500 45		020 MT2	11/29/88	1.885	0.00 > 6.77	0.00 >		0.00
4501 45		020 MT2	11/29/88	1.885	0.00 < 0.32	0.00 >		0.00
4502 45		029 MT2	11/29/88	1.793	0.00 > 100.00	0.00 >		0.00
4503 45		029 MT2	11/29/88	1.793	0.00 > 51.30	0.00 >		0.00
4504 45		029 MT2	11/29/88	1.791	0.00 > 14.98	0.00 >		0.00
4505 45		029 MT2	11/29/88	1.791	0.00 > 100.00	0.00 >		0.00
4506 45		021 MT2	11/29/88	1.698	0.00 > 50.90	0.00 >		0.00
4507 45		02x MT2	11/29/88	1.698	0.00 < 0.32	0.00 >		0.00
4508 45		022 MT2	11/29/88	1.298	0.00 > 8.43	0.00 >		2.81
4509 45		022 MT2	11/29/88	1.298	0.00 > 100.00	0.00 >		6.97
4510 45		030 MT2	11/29/88	1.339	0.00 > 9.76	0.00 >		3.71
4511 45		041 MT2	12/21/88	1.114	0.00 > 21.00	0.00 >		5.32
4512 45		030 MT2	11/29/88	1.339	0.00 < 0.32	0.00 >		0.00
4513 45		031 MT2	11/29/88	1.466	0.00 > 6.47	0.00 >		3.98
4514 45		031 MT2	11/29/88	1.466	0.00 < 0.32	0.00 >		0.00
4515 45		032 MT2	11/29/88	1.381	0.00 > 8.87	0.00 >		1.93
4516 45		032 MT2	11/29/88	1.381	0.00 > 1.43	0.00 >		0.42
4517 45		033 MT2	11/29/88	1.447	0.00 < 0.32	0.00 >		0.00
4518 45		033 MT2	11/29/88	1.447	0.00 > 8.43	0.00 >		0.85
4519 45		034 MT2	11/29/88	1.129	0.00 > 19.00	0.00 >		7.50
4520 45		034 MT2	11/29/88	1.129	0.00 > 22.50	0.00 >		2.30
4521 45		035 MT2	11/29/88	1.269	0.00 > 6.60	0.00 >		3.08
4522 45		035 MT2	11/29/88	1.269	0.00 > 7.45	0.00 >		0.71
4523 45		036 MT2	11/29/88	1.325	0.00 > 20.00	0.00 >		4.42
4524 45		036 MT2	11/29/88	1.325	0.00 > 7.28	0.00 >		1.47
4525 45		037 MT2	11/29/88	1.395	0.00 > 69.10	0.00 >		4.75
4590 61		023 MT2	10/31/89	1.329	0.00 > 4.35	0.00 >		0.00
4592 61		029 MT2	10/31/89	1.329	0.00 > 16.50	0.00 >		0.68
4593 72A		306 CEM	11/01/90	1.261	54.30 > 100.00	> 1.19 >		9.24
4593 72A		305 CEM	11/14/90	0.731	54.00 > 100.00	> 15.64 >		41.68
4593 72A		22P MT2	11/01/90	1.221	52.80 > 100.00	> 1.89 >		13.00
4593 72A		35K MT2	11/14/90	0.668	14.30 > 1000.0	> 6.98 >		33.96
4594 34		042 CEM	03/28/89	1.163	0.00 > 4.95	0.00 >		1.67
4594 34		02A MT2	11/22/88	1.936	0.00 > 4.97	0.00 >		0.00
4594 46		082 MT2	08/08/89	1.242	0.00 > 5.27	0.00 >		0.58
4594 34		011 MT2	11/17/88	1.104	0.00 > 100.00	0.00 >		0.00
4597 34		011 MT2	11/17/88	1.104	0.00 > 100.00	0.00 >		0.34
4599 64		017 MT2	11/22/88	1.603	0.00 > 10.00	0.00 >		6.29
4610 65		22U CEM	08/15/90	1.046	5.40 > 100.00	> 18.53 >		46.54
4611 74		350 CEM	11/13/90	0.822	1.41 > 100.00	> 70.89 >		75.29
4611 65		40R CEM	02/20/91	0.726	0.61 > 100.00	> 193.54 >		83.70
4611 74		346 MT2	11/13/90	1.179	1.64 > 12.30	7.52 >		29.69
4611 65		40G MT2	02/20/91	1.359	0.37 > 29.00	78.79 >		65.94
4729 84		07X MT2	05/11/89	1.364	0.00 > 100.00	0.00 >		13.49
4730 84		102 CEM	10/17/90	1.69	> 100.00	> 64.10 >		7.29
4730 74		307 CEM	11/01/90	1.161	< 0.32	> 100.00	> 312.50 >	99.50

## Cumulative Summary (cont'd)

Avg.	Ship-	Pkt	Call	Test	Diff-		TC 50	TC 25	SI	TAT
No.	ment	#	Line	Date	mtl.					
4730	8A	363	CEN	11/16/90	0.731	<	0.01	> 1000.0	>	99.10
4730	8A	0F8	MT2	05/11/89	1.364	>	87.50	> 100.00	>	1.14 > 9.33
4730	8A	11D	MT2	10/31/90	1.05	>	100.00	0.00	0.00 >	13.11
4730	8A	22P	MT2	11/01/90	1.221	<	0.32	> 100.00	>	312.50 > 97.90
4730	8A	35K	MT2	11/16/90	0.568	<	0.01	> 1000.0	>	0.00 > 97.70
4731	8A	0FY	MT2	05/11/89	1.443		0.00	> 44.50	0.00	0.00
4732	8A	0FY	MT2	05/11/89	1.443		0.00	> 100.00	0.00	0.20
4732	8A	102	CEN	10/17/90	1.69		72.40	0.00	0.00	0.12
4732	8A	11D	MT2	10/31/90	1.05		81.90	0.00	0.00 >	9.10
4733	8A	0F2	MT2	05/11/89	1.289		0.00	> 100.00	0.00	0.00
4734	8A	103	CEN	10/17/90	1.77	>	> 100.00	0.00	0.00 >	6.82
4734	8A	0F2	MT2	05/11/89	1.289		0.00	> 100.00	0.00	0.02
4734	8A	11E	MT2	10/31/90	0.95		85.20	0.00	0.00	3.10
4737	67	101	MT2	07/25/90	1.315		0.00	51.40	0.00	5.64
4738	67	104	MT2	07/25/90	1.212		0.00	69.00	0.00 >	0.80
4796	61	0ZT	MT2	10/31/89	1.426		0.00	54.70	0.00	0.02
4825	61	0ZT	MT2	10/31/89	1.426		0.00	67.70	0.00	1.31
4827	61	0ZU	MT2	10/31/89	1.369		0.00	> 100.00	0.00 >	1.64
4848	61	0ZU	MT2	10/31/89	1.369		0.00	65.30	0.00	0.00
4849	61	0ZY	MT2	10/31/89	1.486		0.00	> 100.00	0.00	0.00
4851	61	0ZY	MT2	10/31/89	1.486		0.00	> 100.00	0.00	1.58
4855	61	112	MT2	11/02/89	1.328		0.00	> 100.00	0.00	0.24
4861	61	112	MT2	11/02/89	1.328		0.00	> 100.00	0.00 >	0.30
4864	64	07A	MT2	02/15/89	0.520		17.90	52.00	2.91 >	30.48
4864	64	OPM	MT2	07/25/89	1.000		0.00	46.80	0.00	1.42
4864	64	08I	MT2	08/08/89	1.289		0.00	65.50	0.00	0.14
4865	64	07B	MT2	02/15/89	0.816		0.00	0.16	0.00	0.00
4865	64	08J	MT2	08/18/89	1.265		0.00	> 100.00	0.00 >	0.02
4866	64	05W	MT2	02/07/89	0.777		0.00	83.00	0.00	2.38
4867	64	07C	MT2	02/15/89	0.831		0.00	< 0.32	0.00	0.00
4867	64	08J	MT2	08/08/89	1.265		0.00	< 0.47	0.00	0.00
4868	64	07C	MT2	02/15/89	0.031		0.00	< 0.32	0.00	0.00
4868	64	08K	MT2	08/08/89	1.384		0.00	< 0.32	0.00	0.00
4869	64	07D	MT2	02/15/89	0.885		0.00	< 0.32	0.00	0.00
4869	64	08K	MT2	08/08/89	1.384		0.00	< 0.32	0.00	0.00
4870	64	07D	MT2	02/15/89	0.885		0.00	1.57	0.00	1.53
4870	64	0RA	MT2	08/08/89	1.517		0.00	1.92	0.00 >	0.30
4871	64	07E	MT2	02/15/89	0.774		0.00	14.80	0.00	6.52
4871	64	0RA	MT2	08/08/89	1.517		0.00	17.20	0.00	3.51
4871	64	113	MT2	11/02/89	1.396		0.00	18.70	0.00	2.42
4872	64	07F	MT2	02/15/89	0.874		0.00	92.70	0.00	7.16
4872	64	0RB	MT2	08/08/89	1.339		0.00	> 100.00	0.00 >	0.10
4873	64	07E	MT2	02/15/89	0.774		0.00	> 100.00	0.00 >	7.71
4873	64	08B	MT2	08/08/89	1.339		0.00	> 100.00	0.00 >	0.55
4874	64	07F	MT2	02/15/89	0.874		0.00	> 100.00	0.00	3.48
4874	64	0QK	MT2	08/09/89	1.223		0.00	> 100.00	0.00	0.80
4875	64	07G	MT2	02/15/89	0.922		0.00	> 100.00	0.00 >	6.21
4875	64	0QK	MT2	08/09/89	1.223		0.00	> 100.00	0.00	0.00
4876	64	07G	MT2	02/15/89	0.922		0.00	49.70	0.00	0.00
4876	64	0QB	MT2	08/09/89	1.149		0.00	> 100.00	0.00	0.00
4877	64	05Q	MT2	12/01/89	0.941		0.00	28.30	0.00 >	1.70
4878	64	05R	MT2	12/01/89	0.970		0.00	91.80	0.00	0.40
4879	64	05R	MT2	02/01/89	0.970		0.00	70.90	0.00	1.15
4880	64	05S	MT2	02/01/89	0.853		0.00	61.80	0.00	0.00
4881	64	05S	MT2	02/01/89	0.853		0.00	7.67	0.00	0.39
4882	64	05T	MT2	02/01/89	0.906		0.00	15.50	0.00	0.00
4883	64	05T	MT2	02/01/89	0.906		0.00	> 100.00	0.00 >	1.26
4884	64	05U	MT2	02/01/89	0.973		0.00	> 100.00	0.00 >	3.80
4885	64	05U	MT2	02/01/89	0.973		0.00	43.10	0.00	2.08
4886	64	05V	MT2	02/01/89	0.863		0.00	48.40	0.00	0.00
4887	64	05V	MT2	02/01/89	0.863		0.00	4.94	0.00	0.00
4888	64	05K	MT2	02/01/89	0.792		0.00	> 100.00	0.00	0.00
4889	64	05L	MT2	02/01/89	0.711		0.00	50.00	0.00	0.00
4890	64	05L	MT2	02/01/89	0.711		0.00	32.00	0.00	0.00
4891	64	05M	MT2	02/01/89	0.871		0.00	< 0.32	0.00	0.00
4892	64	05M	MT2	02/01/89	0.871		0.00	55.90	0.00	0.00
4893	64	05M	MT2	02/01/89	0.897		0.00	> 100.00	0.00 >	1.18
4894	64	05M	MT2	02/01/89	0.897		0.00	> 100.00	0.00	1.00
4895	64	05X	MT2	02/07/89	0.666		0.00	19.80	0.00	6.90
4896	64	05O	MT2	02/01/89	0.867		0.00	53.30	0.00	4.76
4897	64	05O	MT2	02/01/89	0.867		0.00	49.00	0.00	0.00
4897	61	113	MT2	11/02/89	1.396		0.00	> 100.00	0.00	0.00
4898	64	05P	MT2	02/01/89	1.086		0.00	1.56	0.00 >	0.50
4899	64	05X	MT2	02/07/89	0.666		0.00	< 0.32	0.00	0.00
4900	64	05Y	MT2	02/07/89	0.899		0.00	< 0.32	0.00	0.00
4901	64	05Y	MT2	02/07/89	0.899		0.00	4.70	0.00	1.81
4902	64	05Z	MT2	02/07/89	0.924		0.00	< 0.32	0.00	0.00
4903	64	05Z	MT2	02/07/89	0.924		0.00	< 0.32	0.00	0.00

## Cumulative Summary (cont'd)

AVB	Ship- No.	PIC	Cell # Line	Test Date	Diff- mtl.	% 50	% 25	\$1	TAI
4902	44	062	MT2	02/07/89	0.934	0.00	2.47	0.00	0.00
4903	44	066	MT2	02/07/89	0.934	0.00	0.32	0.00	0.00
4906	44	061	MT2	02/07/89	0.747	0.00	3.52	0.00	0.00
4907	44	061	MT2	02/07/89	0.747	0.00	0.32	0.00	0.00
4908	44	062	MT2	02/07/89	0.631	0.00	55.90	0.00	5.34
4909	44	063	MT2	02/07/89	0.637	0.00	47.80	0.00	6.34
4910	44	063	MT2	02/07/89	0.637	0.00	58.00	0.00	9.27
4911	44	064	MT2	02/07/89	0.548	<	0.32	11.50	> 36.00
4911	44	064	MT2	07/25/89	1.080	0.00	2.67	0.00	0.00
4911	65	144	MT2	05/16/90	1.098	0.00	18.20	0.00	0.00
4912	44	064	MT2	02/07/89	0.548	>	0.00	100.00	0.00
4913	44	063	MT2	08/08/89	1.208	0.00	100.00	0.00	5.82
4914	44	063	MT2	08/08/89	1.208	0.00	9.74	0.00	1.04
4915	45	245	CEN	08/15/90	1.042	0.00	40.70	0.00	0.00
4915	44	066	MT2	02/07/89	0.590	<	0.32	39.10	> 122.00
4915	61	114	MT2	11/02/89	1.401	0.00	16.90	0.00	0.00
4916	44	066	MT2	02/07/89	0.590	0.00	6.60	0.00	10.52
4917	44	067	MT2	02/07/89	0.519	0.00	16.80	0.00	13.92
4918	44	067	MT2	02/07/89	0.519	>	23.20	> 100.00	4.50
4918	44	068	MT2	07/25/89	0.924	0.00	0.36	0.00	0.00
4918	61	114	MT2	11/02/89	1.401	0.00	19.20	0.00	0.00
4918	65	142	MT2	05/16/90	1.179	0.00	52.20	0.00	1.10
4919	44	064	MT2	08/08/89	1.217	0.00	28.20	0.00	1.56
4919	61	115	MT2	11/02/89	1.405	0.00	49.90	0.00	1.81
4920	44	064	MT2	08/08/89	1.217	0.00	34.30	0.00	1.14
4921	44	065	MT2	08/08/89	1.259	0.00	6.36	0.00	0.00
4923	65	242	CEN	08/21/90	0.830	<	0.32	97.40	> 304.33
4923	44	068	MT2	08/03/89	0.896	0.42	15.50	37.26	> 58.53
4923	65	142	MT2	05/16/90	1.179	<	0.32	> 100.00	> 312.50
4923	65	119	MT2	07/18/90	1.034	>	1.00	> 12.56	> 30.40
4924	44	06X	MT2	08/03/89	0.896	0.00	0.49	0.00	0.00
4925	44	06Y	MT2	08/03/89	1.032	0.00	6.42	0.00	1.38
4926	44	06Y	MT2	08/03/89	1.032	0.00	48.00	0.00	2.85
4927	44	062	MT2	08/03/89	0.924	>	100.00	0.00	> 12.91
4928	44	062	MT2	08/03/89	0.924	0.00	100.00	0.00	0.24
4929	44	010	MT2	11/22/88	1.500	0.00	3.20	0.00	4.40
4930	44	010	MT2	11/22/88	1.500	>	3.20	0.00	2.88
4931	44	010	MT2	11/22/88	1.322	0.00	3.20	0.00	0.00
4932	51	050	MT2	05/09/89	1.297	0.00	57.30	0.00	> 0.76
4933	51	050	MT2	05/09/89	1.227	0.00	17.40	0.00	1.61
4934	51	050	MT2	05/09/89	1.227	0.00	38.50	0.00	0.35
4935	51	066	MT2	05/16/89	1.277	0.00	28.30	0.00	0.00
4936	51	063	MT2	05/10/89	1.188	>	100.00	0.00	> 1.73
4937	51	063	MT2	05/10/89	1.188	0.00	49.20	0.00	1.14
4938	51	064	MT2	05/13/89	0.977	>	100.00	0.00	0.00
4939	51	064	MT2	04/06/89	1.540	0.00	44.10	0.00	> 0.10
4940	51	064	MT2	04/06/89	1.540	0.00	15.50	0.00	1.25
4941	51	068	MT2	04/06/89	1.604	0.00	48.10	0.00	0.00
4942	51	068	MT2	04/06/89	1.504	0.00	77.30	0.00	0.20
4943	51	068	MT2	04/06/89	1.709	0.00	4.50	0.00	0.00
4944	51	068	MT2	04/06/89	1.709	0.00	18.10	0.00	0.00
4945	51	060	MT2	04/06/89	1.597	0.00	1.94	0.00	0.00
4946	51	060	MT2	04/06/89	1.597	0.00	21.00	0.00	0.11
4947	51	06P	MT2	04/06/89	1.297	0.00	1.30	0.00	0.00
4948	51	06P	MT2	04/06/89	1.297	>	100.00	0.00	0.00
4949	51	07S	MT2	05/09/89	1.307	0.00	45.60	0.00	> 0.75
4950	51	07S	MT2	05/09/89	1.307	0.00	0.67	0.00	0.00
4951	51	0FT	MT2	05/09/89	1.143	0.00	16.00	0.00	0.00
4953	51	0FT	MT2	05/09/89	1.183	0.00	16.20	0.00	0.11
4954	51	064	MT2	05/10/89	0.977	>	100.00	0.00	> 0.00
4955	51	065	MT2	05/10/89	1.076	<	0.32	0.00	> 0.00
4955	51	11W	MT2	11/07/89	1.446	0.00	0.02	0.00	0.16
4955	53	144	MT2	12/05/89	1.416	0.00	0.01	0.00	1.00
4956	51	065	MT2	05/10/89	1.076	>	100.00	0.00	> 0.50
4957	51	066	MT2	05/10/89	0.984	0.00	26.70	0.00	> 0.37
4958	51	066	MT2	05/10/89	0.984	0.00	0.56	0.00	0.00
4959	51	067	MT2	05/10/89	0.980	0.00	> 100.00	0.00	> 2.10
4960	51	067	MT2	05/10/89	0.980	0.00	17.90	0.00	0.00
4961	51	068	MT2	05/10/89	1.154	0.00	60.80	0.00	> 1.86
4962	51	068	MT2	05/10/89	1.154	0.00	53.50	0.00	0.11
4965	51	069	MT2	05/10/89	1.044	0.00	50.10	0.00	0.00
4966	51	069	MT2	05/10/89	1.044	0.00	24.10	0.00	1.00
4967	51	06A	MT2	05/10/89	1.113	>	100.00	0.00	> 5.48
4968	51	06A	MT2	05/10/89	1.113	>	100.00	0.00	> 2.03
4969	51	06U	MT2	05/17/89	1.172	0.00	15.50	0.00	> 1.06
4970	51	06U	MT2	05/17/89	1.172	0.00	24.90	0.00	2.73
4971	51	06V	MT2	05/17/89	1.329	>	100.00	0.00	0.00
4972	51	06V	MT2	05/17/89	1.329	0.00	47.90	0.00	0.70

## CUMULATIVE SUMMARY (cont'd)

AVS	Ship- ment	Pkt Cell # Line	Test Date	Diff- rential	IC 50	TC 25	SI	TAI
4973	51	04W HT2	05/17/89	1.105	0.00	50.50	0.00	1.21
4974	51	04W HT2	05/17/89	1.105	0.00	83.50	0.00	0.91
4975	51	04X HT2	05/17/89	1.480	0.00	> 100.00	0.00	0.00
4976	51	06Z HT2	05/17/89	1.480	0.00	48.20	0.00	0.32
4977	51	06Y HT2	05/17/89	1.274	0.00	80.60	0.00	~.14
4978	51	06Y HT2	05/17/89	1.274	0.00	> 100.00	0.00	0.44
4979	51	04J HT2	05/23/89	0.919	0.00	16.10	0.00	11.21
4980	51	04J HT2	05/23/89	0.919	0.00	1.63	0.00	1.43
4981	51	04E HT2	05/23/89	0.843	0.00	> 100.00	0.00	12.11
4982	51	04J HT2	05/23/89	0.843	0.00	63.50	0.00	12.83
4983	51	04S HT2	05/23/89	1.040	0.00	21.70	0.00	2.31
4984	51	04S AT2	05/23/89	1.040	0.00	16.30	0.00	0.51
4985	51	04E HT2	05/23/89	0.984	0.00	15.50	0.00	1.70
4986	51	04E HT2	05/23/89	0.984	0.00	> 100.00	0.00	9.30
4987	51	04T HT2	05/23/89	0.859	0.00	21.00	0.00	8.26
4988	51	04T HT2	05/23/89	0.859	0.00	49.00	0.00	5.89
4990	51	04H HT2	05/16/89	1.277	0.00	< 0.32	0.00	0.00
4990	51	11W HT2	11/07/89	1.443	0.00	< 0.32	0.00	12.45
4991	51	04T HT2	05/16/89	1.386	0.00	> 100.00	0.00	6.73
4992	51	04T HT2	05/16/89	1.386	0.00	> 100.00	0.00	2.79
4993	51	04H HT2	05/16/89	0.500	0.00	43.50	0.00	23.39
4993	53	04X HT2	05/25/89	1.273	0.00	48.50	0.00	0.20
4993	51	04P HT2	04/20/89	1.803	0.00	61.30	0.00	0.00
4993	51	04R HT2	06/20/89	0.873	0.00	62.90	0.00	0.00
4994	51	017 HT2	05/17/89	1.154	0.00	48.50	0.00	1.00
4995	51	015 HT2	05/17/89	1.275	0.00	18.60	0.00	0.00
4996	51	015 HT2	05/17/89	1.275	0.00	> 100.00	0.00	0.00
4997	51	016 HT2	05/17/89	1.196	0.00	> 100.00	0.00	0.11
4998	51	016 HT2	05/17/89	1.196	0.00	29.80	0.00	0.41
4999	51	017 HT2	05/17/89	1.154	0.00	6.53	0.00	0.72
5010	11A	103 CEM	10/17/90	1.77	> 100.00	0.00	0.00	1.70
5010	11A	086 HT2	03/28/89	1.416	0.00	> 100.00	0.00	1.27
5010	11A	11E HT2	10/31/90	0.95	> 100.00	0.00	0.00	1.90
5011	11A	104 CEM	10/17/90	1.77	> 100.00	0.00	0.00	1.20
5011	11A	086 HT2	03/25/89	1.416	0.00	79.20	0.00	0.20
5011	11A	11F HT2	10/31/90	0.99	> 100.00	0.00	0.00	2.34
5013	11A	104 CEM	10/17/90	1.77	> 100.00	0.00	0.00	3.30
5013	11A	087 HT2	03/25/89	1.427	0.00	79.20	0.00	3.37
5013	11A	11G HT2	10/31/90	0.99	> 100.00	0.00	0.00	1.30
5019	11A	082 HT2	03/28/89	1.417	0.00	> 100.00	0.00	0.30
5024	44	040 CEM	03/28/89	1.465	0.00	4.65	0.00	0.77
5024	44	01V HT2	11/22/88	1.322	0.00	4.90	0.00	0.00
5324	44	040 HT2	08/09/89	1.127	73.70	> 100.00	1.36	5.46
5025	45	4CS CEM	02/20/91	0.803	7.90	7.73	0.98	33.75
5025	84	040 HT2	05/11/89	1.268	34.80	> 100.00	2.87	21.54
5025	52	040 HT2	08/01/89	1.223	11.80	> 100.00	8.44	33.60
5025	68	14W HT2	08/01/90	1.296	55.90	> 100.00	1.79	5.35
5025	65	4CH HT2	02/20/91	1.552	2.21	79.90	56.21	57.56
5026	84	040 HT2	05/11/89	1.268	0.00	> 100.00	0.00	0.70
5027	44	04S CEM	02/28/89	1.465	48.10	> 100.00	2.08	19.37
5027	44	04Z HT2	01/16/89	0.645	0.00	5.01	0.00	1.90
5027	44	05P HT2	02/01/89	1.086	0.00	5.30	0.00	2.89
5027	44	0PE HT2	07/26/89	1.205	0.00	4.85	0.00	0.00
5028	84	061 HT2	05/11/89	1.442	0.00	> 100.00	0.00	0.00
5029	48	062 HT2	02/14/89	0.879	0.00	1.78	0.00	0.79
5030	48	070 HT2	02/14/89	0.828	0.00	26.20	0.00	6.26
5031	48	070 HT2	02/14/89	0.828	0.00	16.30	0.00	3.01
5032	48	071 HT2	02/14/89	0.923	0.00	19.30	0.00	2.21
5032	48	071 HT2	02/14/89	0.923	0.00	20.60	0.00	0.21
5034	48	072 HT2	02/14/89	1.000	0.00	> 100.00	0.00	3.84
5035	48	072 HT2	02/14/89	1.000	0.00	0.17	0.00	0.42
5034	48	073 HT2	02/14/89	1.013	0.00	> 100.00	0.00	2.31
5037	48	073 HT2	02/14/89	1.013	0.00	> 100.00	0.00	8.42
5038	48	074 HT2	02/14/89	0.882	0.00	> 100.00	0.00	0.00
5040	45	03C HT2	12/01/88	1.958	0.00	36.31	0.00	1.20
5041	45	03C HT2	12/01/88	1.958	0.00	> 100.00	0.00	0.00
5042	45	03D HT2	12/01/88	1.953	0.00	> 100.00	0.00	7.21
5047	48	074 HT2	02/14/89	0.882	0.00	> 100.00	0.00	0.35
5048	45	01W HT2	11/22/88	0.851	0.00	> 100.00	0.00	14.90
5048	48	04T HT2	02/14/89	0.639	0.00	> 100.00	0.00	6.71
5049	48	06L HT2	02/14/89	0.638	0.00	0.78	0.00	0.00
5050	48	06W HT2	02/14/89	0.636	0.00	0.56	0.00	0.00
5051	48	06Y HT2	02/14/89	0.715	0.00	0.66	0.00	0.00
5052	48	06W HT2	02/14/89	0.715	0.00	100.00	0.00	3.10
5053	48	06W HT2	02/14/89	0.645	0.00	12.40	0.00	3.86
5054	48	06W HT2	02/14/89	0.645	0.00	> 100.00	0.00	1.50
5059	48	06X HT2	02/14/89	0.643	0.00	> 100.00	0.00	8.71
5060	48	06X HT2	02/14/89	0.643	0.00	> 100.00	0.00	6.14

## Cumulative Summary (cont'd)

AVG No.	Ship- ment	Pit Cell #	First Date	Diff. mtl.	TC 50	TC 25	SI	TAI
5061	48	06Y	MT2	02/14/89	0.757	0.00	49.80	0.00 > 4.46
5062	48	06Y	MT2	02/14/89	0.757	0.00	97.40	0.00 0.54
5063	65	4CS	CEN	02/20/91	0.903	0.00	35.40	0.00 0.00
5063	48	0MP	MT2	07/25/89	0.976	0.00 > 100.00	0.00 >	2.78
5063	65	4CN	MT2	02/20/91	1.452	0.00	63.50	0.00 0.00
5065	74	350	CEN	11/13/90	0.822	0.00 > 100.00	0.00 >	0.00
5065	65	4CT	CEN	02/20/91	0.832	0.00 > 100.00	0.00 >	0.14
5065	48	0MP	MT2	07/25/89	0.990	0.00 > 100.00	0.00 >	0.72
5065	74	34G	MT2	11/13/90	1.179	0.00 > 100.00	0.00 >	0.00
5065	65	4C1	MT2	02/20/91	1.432	0.00 > 100.00	0.00 >	0.00
5066	65	22R	CEN	08/15/90	1.060	0.00 > 100.00	0.00 >	0.03
5066	48	0PQ	MT2	07/25/89	0.990	0.00 > 100.00	0.00 >	5.61
5067	48	0PR	MT2	07/25/89	1.016	0.00 > 100.00	0.00 >	10.37
5068	43	02O	MT2	10/12/89	1.425	0.00	59.40	0.00 0.26
5069	48	02O	MT2	10/12/89	1.425	0.00	72.50	0.00 0.32
5070	65	4CT	CEN	02/20/91	0.882	0.00	45.20	0.00 > 0.00
5070	48	07X	MT2	02/16/89	0.845	2.69 > 100.00	37.10 >	29.60
5070	48	0PQ	MT2	07/25/89	1.016	0.00	17.60	0.00 2.28
5070	48	021	MT2	10/12/89	1.382	0.00	21.00	0.00 > 2.04
5070	65	4C1	MT2	02/20/91	1.432	0.00	48.10	0.00 0.00
5071	65	22R	CEN	08/15/90	1.062	0.00	6.98	0.00 0.00
5071	48	07X	MT2	02/16/89	0.845	0.34	48.60	143.00 > 30.12
5071	48	0PQ	MT2	07/25/89	1.024	0.00	11.30	0.00 > 2.28
5071	48	021	MT2	10/12/89	1.382	0.00	6.95	0.00 0.00
5071	61	11S	MT2	11/02/89	1.605	0.00	7.25	0.00 0.00
5072	48	07Y	MT2	02/16/89	0.785	0.00	67.60	0.00 > 17.47
5072	48	022	MT2	10/12/89	1.354	0.00	54.30	0.00 > 2.19
5073	74	02B	MT2	11/22/88	1.913	0.00 > 100.00	0.00 >	0.00
5074	74	02B	MT2	11/22/88	1.913	0.00 > 100.00	0.00 >	0.66
5075	74	351	CEN	11/13/90	0.758	0.00	5.47	0.00 0.00
5075	48	07Y	MT2	02/16/89	0.785	0.64 > 17.20	26.80 >	24.74
5075	48	0PQ	MT2	07/25/89	1.024	0.00	60.30	0.00 > 6.73
5075	74	34M	MT2	11/13/90	1.203	0.00	19.30	0.00 0.81
5080	51	01E	MT2	05/22/89	1.293	0.00 > 100.00	0.00 >	4.41
5081	51	01E	MT2	05/22/89	1.293	0.00	6.90	0.00 > 0.14
5082	51	01F	MT2	05/22/89	1.264	0.00 < 0.32	0.00 >	0.00
5082	51	11X	MT2	11/07/89	1.475	0.00 > 1.00	0.00 >	0.13
5083	51	01F	MT2	05/22/89	1.264	0.00 < 0.32	0.00 >	0.00
5083	51	11X	MT2	11/07/89	1.475	0.00 < 0.01	0.00 >	0.00
5084	51	01G	MT2	05/22/89	1.193	0.00	11.50	0.00 > 1.70
5085	51	01G	MT2	05/22/89	1.193	0.00 < 0.32	0.00 >	0.00
5085	51	11Y	MT2	11/07/89	1.477	0.00 > 1.00	0.00 >	1.33
5086	51	01K	MT2	05/22/89	1.232	0.00 > 100.00	0.00 >	5.20
5087	54	1L2	MT2	05/03/90	1.185	0.00 > 100.00	0.00 >	0.80
5088	56	1L3	MT2	05/03/90	1.209	0.00 > 100.00	0.00 >	2.55
5089	56	1L3	MT2	05/03/90	1.209	0.00 > 100.00	0.00 >	0.70
5090	56	1L4	MT2	05/03/90	1.161	0.00 > 100.00	0.00 >	3.13
5091	56	1L4	MT2	05/03/90	1.161	0.00	0.72	0.00 0.00
5091	56	10B	MT2	05/22/90	1.085	0.00	0.78	0.00 > 17.47
5092	56	1L5	MT2	05/03/90	1.198	0.00	15.50	0.00 0.75
5093	56	1L5	MT2	05/03/90	1.198	0.00 < 0.32	0.00 >	0.00
5093	56	10B	MT2	05/22/90	1.085	0.00	0.04	0.00 > 0.84
5094	56	1L7	MT2	05/02/90	1.157	0.00	45.20	0.00 1.01
5095	56	1L7	MT2	05/02/90	1.157	0.00 > 100.00	0.00 >	0.88
5096	56	1L8	MT2	05/02/90	1.155	0.00	1.55	0.00 > 0.20
5097	54	205	CEN	08/07/90	1.135	0.00 > 100.00	0.00 >	0.31
5097	56	1L8	MT2	05/02/90	1.155	0.00 > 100.00	0.00 >	3.30
5098	56	1UW	CEN	07/19/90	0.767	0.00 > 100.00	0.00 >	2.38
5098	56	1L9	MT2	05/02/90	1.154	0.00 > 100.00	0.00 >	5.29
5099	56	1T8	CEN	07/17/90	1.357	0.00 > 100.00	0.00 >	3.46
5099	56	1L9	MT2	05/02/90	1.154	0.00 > 100.00	0.00 >	4.51
5100	56	1LA	MT2	05/02/90	1.094	0.00 < 0.32	0.00 >	0.00
5100	56	109	MT2	05/22/90	1.025	0.00 < 0.32	0.00 >	0.00
5101	56	1LA	MT2	05/02/90	1.094	0.00	17.20	0.00 0.80
5102	56	1LB	MT2	05/02/90	1.125	0.00	18.70	0.00 > 0.78
5103	56	1LB	MT2	05/02/90	1.125	0.00	17.50	0.00 > 2.40
5104	56	10D	MT2	05/02/90	1.201	0.00 < 0.32	0.00 >	0.00
5104	56	109	MT2	05/22/90	1.025	0.00 < 0.32	0.00 >	0.00
5105	56	1TK	CEN	07/17/90	1.425	10.00	55.30	5.53 > 28.82
5105	73	2GK	CEN	09/28/90	0.873	0.00	39.00	0.00 1.97
5105	56	1K1	MT2	05/02/90	1.201	0.00 > 100.00	0.00 >	2.29
5105	73	2G5	MT2	09/28/90	1.052	0.00	51.60	0.00 0.00
5106	56	1K1	MT2	05/02/90	1.219	0.00 < 0.32	0.00 >	0.00
5106	56	1K4	MT2	05/22/90	1.110	0.00 < 0.32	0.00 >	0.00
5107	56	1K1	MT2	05/02/90	1.219	0.00	15.50	0.00 1.20
5108	56	1TK	CEN	07/17/90	1.425	0.00 > 100.00	0.00 >	7.40
5108	56	1K1	MT2	05/02/90	1.226	0.00 > 100.00	0.00 >	2.50
5109	56	1TL	CEN	07/17/90	1.368	0.00 > 100.00	0.00 >	0.84

## Cumulative Summary (cont'd)

AVN	Ship- ment	Pkt Cell # Line	Test Date	Diff- mtl.	IC 50	TC 25	\$1	TAI
S109	56	1CT MT2	05/02/90	1.226	0.00	> 100.00	0.00	> 1.60
S110	56	1C2 MT2	05/02/90	1.161	0.00	5.56	0.00	0.00
S111	56	1CL CEM	07/17/90	1.348	0.00	> 100.00	0.00	> 1.41
S111	56	1C2 MT2	05/02/90	1.161	0.00	> 100.00	0.00	> 6.00
S112	56	1C0 MT2	05/02/90	1.243	0.00	0.47	0.00	0.00
S112	56	10A MT2	05/22/90	1.110	0.00	0.60	0.00	> 0.23
S113	56	1C0 MT2	05/02/90	1.243	0.00	4.53	0.00	0.23
S114	56	1RW CEM	07/05/90	1.175	67.50	> 100.00	> 1.44	> 18.65
S114	56	1R3 MT2	05/08/90	1.023	0.00	> 100.00	0.00	> 3.90
S115	56	1R3 MT2	05/08/90	1.023	0.00	> 100.00	0.00	> 4.11
S116	56	1R4 MT2	05/08/90	0.966	0.00	> 100.00	0.00	> 2.93
S117	56	1R4 MT2	05/08/90	0.966	0.00	4.95	0.00	1.06
S118	56	1R5 MT2	05/08/90	1.055	0.00	> 100.00	0.00	> 3.80
S119	56	1R5 MT2	05/08/90	1.055	0.00	9.50	0.00	> 0.20
S120	56	1R6 MT2	05/08/90	1.194	0.00	54.10	0.00	> 5.83
S121	74	351 CEM	11/13/90	0.758	2.83	62.90	22.22	> 54.12
S121	56	1R6 MT2	05/08/90	1.194	17.70	53.30	3.00	> 19.53
S121	74	34X MT2	11/13/90	1.203	17.00	56.00	3.29	19.62
S122	56	1R7 MT2	05/08/90	1.060	0.00	> 100.00	0.00	> 3.30
S123	56	1R7 MT2	05/08/90	1.060	0.00	26.70	0.06	0.00
S124	56	1R8 MT2	05/08/90	1.199	0.00	5.30	0.00	> 5.81
S126	58	1LX MT2	05/10/90	0.917	0.00	> 100.00	0.00	> 5.28
S126	58	1M8 MT2	05/08/90	1.189	0.00	17.50	0.00	> 6.49
S128	56	1M9 MT2	05/08/90	1.164	0.00	15.60	0.00	> 2.00
S129	56	1RW CEM	07/05/90	1.175	0.00	> 100.00	0.00	> 5.43
S129	56	1M9 MT2	05/08/90	1.164	0.00	> 100.00	0.00	> 6.20
S130	56	1M8 MT2	05/08/90	0.900	0.00	5.24	0.00	> 6.37
S131	56	1M8 MT2	05/08/90	0.900	0.00	0.64	0.00	> 0.06
S131	56	1OC MT2	05/22/90	1.078	0.00	> 1.00	0.00	> 7.60
S132	56	1M8 MT2	05/08/90	1.075	0.00	4.25	0.00	0.00
S133	56	1M8 MT2	05/08/90	1.075	0.00	1.57	0.00	0.00
S134	57	083 MT2	08/17/89	1.303	0.00	> 100.00	0.00	0.00
S135	57	083 MT2	08/17/89	1.303	0.00	> 100.00	0.00	> 2.63
S136	57	084 MT2	08/17/89	1.344	0.00	82.00	0.00	> 2.60
S137	57	084 MT2	08/17/89	1.344	0.00	> 100.00	0.00	> 2.30
S138	57	085 MT2	08/17/89	1.400	0.00	> 100.00	0.00	> 2.69
S139	57	085 MT2	08/17/89	1.400	0.00	15.50	0.00	2.02
S140	57	086 MT2	08/17/89	1.469	0.00	> 100.00	0.00	> 0.72
S141	57	086 MT2	08/17/89	1.469	0.00	> 100.00	0.00	0.20
S142	57	087 MT2	08/17/89	1.231	0.00	49.00	0.00	> 7.50
S145	57	087 MT2	08/17/89	1.231	0.00	> 100.00	0.00	> 5.06
S146	57	0VX MT2	06/30/89	1.314	0.00	1.61	0.00	0.00
S147	57	0VX MT2	08/30/89	1.314	0.00	> 100.00	0.00	0.48
S148	57	0VX MT2	08/30/89	1.332	0.00	14.20	0.00	> 0.80
S149	57	0VX MT2	08/30/89	1.332	0.00	0.51	0.00	0.00
S150	57	0VM MT2	08/30/89	1.202	0.00	> 100.00	0.00	> 0.18
S151	57	0VM MT2	08/30/89	1.202	0.00	> 100.00	0.00	> 0.86
S152	57	0SM MT2	08/23/89	1.14	0.00	> 100.00	0.00	> 2.60
S153	57	0T4 MT2	08/23/89	1.331	0.00	32.00	0.00	1.03
S154	57	0T7 MT2	08/22/89	1.528	0.00	36.30	0.00	0.00
S155	57	0T7 MT2	08/22/89	1.528	0.00	1.75	0.00	> 1.61
S156	57	0T2 MT2	08/22/89	1.490	0.00	< 0.32	0.00	0.00
S157	57	0T2 MT2	08/22/89	1.490	0.00	> 100.00	0.00	0.86
S158	57	0T0 MT2	08/22/89	1.591	0.00	5.24	0.00	0.00
S159	57	0T0 MT2	08/22/89	1.591	0.00	> 100.00	0.00	0.00
S160	57	0T1 MT2	08/22/89	1.480	0.00	> 100.00	0.00	0.20
S161	57	0T1 MT2	08/22/89	1.480	0.00	36.40	0.00	0.02
S162	57	0T3 MT2	08/23/89	1.253	0.00	> 100.00	0.00	> 3.10
S163	57	0T3 MT2	08/23/89	1.253	0.00	71.50	0.00	> 2.50
S164	57	1LZ MT2	05/09/90	1.169	0.00	10.30	0.00	> 0.30
S164	65	1M3 MT2	05/16/90	1.031	0.00	8.87	0.00	> 1.40
S165	65	1RW CEM	07/24/90	0.775	0.00	> 100.00	0.00	0.00
S165	64	1M0 MT2	05/09/90	1.028	0.00	> 100.00	0.00	> 6.89
S165	65	1M3 MT2	05/16/90	1.031	0.00	> 100.00	0.00	> 9.50
S165	57	22A MT2	08/21/90	1.353	0.00	320.00	0.00	> 7.06
S166	58	0T8 MT2	08/24/89	1.173	0.00	0.79	0.00	0.00
S167	58	0T8 MT2	08/24/89	1.173	0.00	0.90	0.00	0.00
S168	58	0T8 MT2	08/24/89	1.216	0.00	4.90	0.00	0.00
S169	58	0T8 MT2	08/24/89	1.216	0.00	0.93	0.00	0.00
S170	58	0T8 MT2	08/24/89	1.218	0.00	1.37	0.00	> 0.05
S171	58	0T8 MT2	08/24/89	1.218	0.00	3.63	0.00	0.00
S172	58	0T8 MT2	08/24/89	1.248	0.00	> 100.00	0.00	> 1.40
S173	58	0T8 MT2	08/24/89	1.248	0.00	5.03	0.00	0.00
S174	58	0T8 MT2	08/24/89	1.248	0.00	59.90	0.00	> 4.16
S175	58	0T7 MT2	08/24/89	1.248	0.00	16.00	0.00	> 1.25
S176	58	0U8 MT2	08/24/89	0.975	0.00	15.30	0.00	0.00
S177	58	0U9 MT2	08/24/89	0.919	0.00	47.60	0.00	> 0.30
S178	58	0U9 MT2	08/24/89	0.919	0.00	> 100.00	0.00	> 4.18

## Cumulative Summary (cont'd)

AVS	Ship-	Pot. Cell	Test	Diff-	IC 50	IC 25	\$1	TA1
No.	ment	# Line	Date	mtl.				
5179	58	OT2	MT2	08/24/89	1.054	0.00 > 100.00	0.00 >	2.48
5180	58	OVO	MT2	08/24/89	1.072	0.00 > 100.00	0.00 >	0.94
5181	58	OVO	MT2	08/25/89	1.072	0.00 > 100.00	0.00 >	0.94
5182	58	OUI	MT2	08/24/89	1.081	0.00 > 100.00	0.00 >	5.80
5183	58	OUI	MT2	08/24/89	1.081	0.00 > 100.00	0.00 >	2.80
5184	58	OT6	MT2	10/10/89	1.379	0.00 > 100.00	0.00 >	7.30
5185	58	OVO	MT2	08/30/89	1.363	0.00 > 53.30	0.00 >	2.40
5186	74	352	CCM	11/13/90	0.718	1.73 > 100.00 >	57.85 >	71.53
5186	58	OVO	MT2	08/29/89	1.298	4.81 93.80	19.49 >	36.31
5186	58	OVO	MT2	08/29/89	1.298	4.81 93.80	19.49 >	36.31
5186	65	1M4	MT2	04/16/90	0.991	11.50 56.30	6.88 >	23.52
5186	74	341	MT2	11/13/90	1.177	0.00 < 5.30	0.00 >	0.20
5187	58	OVO	MT2	08/29/89	1.298	0.00 < 0.32	0.00 >	0.00
5188	58	OUP	MT2	08/29/89	1.238	0.00 < 0.32	0.00 >	0.00
5189	58	OUP	MT2	08/29/89	1.238	0.00 < 0.31	0.00 >	0.08
5190	58	OUP	MT2	08/29/89	1.309	0.00 < 0.51	0.00 >	0.00
5191	58	OUP	MT2	08/29/89	1.309	0.00 < 0.49	0.00 >	0.00
5192	58	OUP	MT2	08/29/89	1.321	0.00 > 100.00	0.00 >	4.71
5194	58	OUP	MT2	08/29/89	1.321	0.00 > 3.86	0.00 >	0.00
5195	58	OUS	MT2	08/29/89	1.307	0.00 > 4.30	0.00 >	0.01
5196	58	OUS	MT2	08/29/89	1.307	0.00 > 1.44	0.00 >	0.00
5197	58	OT6	MT2	10/10/89	1.379	0.00 > 9.00	0.00 >	15.12
5198	58	OT7	MT2	10/10/89	1.721	0.00 > 49.00	0.00 >	10.30
5200	52	OT7	MT2	10/10/89	1.721	0.00 > 46.30	0.00 >	4.71
5201	58	OT8	MT2	10/10/89	1.696	0.00 > 22.00	0.00 >	1.74
5202	58	OT8	MT2	10/10/89	1.696	0.00 > 100.00	0.00 >	7.40
5203	58	OT9	MT2	10/10/89	1.673	0.00 < 0.32	0.00 >	0.00
5204	58	OT9	MT2	10/10/89	1.673	0.00 < 0.32	0.00 >	0.00
5205	58	OT9	MT2	10/10/89	0.860	0.00 < 1.61	0.00 >	0.00
5206	58	OVO	MT2	08/30/89	1.343	0.00 > 47.90	0.00 >	0.00
5207	58	OVP	MT2	08/30/89	1.253	0.00 > 4.32	0.00 >	0.03
5208	58	OVP	MT2	08/30/89	1.253	0.00 > 100.00	0.00 >	0.94
5210	58	1LV	MT2	05/10/90	0.828	0.00 > 24.10	0.00 >	2.30
5211	58	1LV	MT2	05/10/90	0.904	0.00 > 3.66	0.00 >	0.16
5213	58	1LV	MT2	05/10/90	0.904	0.00 > 0.51	0.00 >	0.00
5215	58	1NP	MT2	05/10/90	0.873	0.00 > 100.00	0.00 >	4.30
5216	58	1NP	MT2	05/10/90	0.873	0.00 > 100.00	0.00 >	4.24
5217	10A	O19	MT2	05/22/89	1.277	0.00 > 100.00	0.00 >	2.17
5218	10A	O1A	MT2	05/22/89	1.224	0.00 > 4.93	0.00 >	3.64
5223	52	OLD	MT2	06/20/89	1.051	0.00 > 22.50	0.00 >	0.00
5224	52	OLD	MT2	06/20/89	1.051	0.00 > 85.10	0.00 >	0.00
5225	53	OJW	MT2	05/25/89	1.310	0.00 > 6.18	0.00 >	0.14
5225	52	OJL	MT2	06/20/89	1.137	0.00 > 13.10	0.00 >	0.00
5226	52	OJL	MT2	06/20/89	1.137	0.00 > 16.80	0.00 >	0.00
5227	52	OJF	MT2	06/20/89	1.211	0.00 > 17.30	0.00 >	4.77
5228	52	OJF	MT2	06/20/89	1.211	0.00 > 100.00	0.00 >	14.10
5228	52	OJL	MT2	06/21/89	0.011	0.00 > 16.10	0.00 >	3.21
5229	52	OJG	MT2	06/20/89	3.840	0.00 > 7.50	0.00 >	6.59
5230	52	OJG	MT2	06/20/89	0.860	0.00 > 100.00	0.00 >	2.93
5230	52	OJL	MT2	06/21/89	1.011	0.00 > 28.30	0.00 >	2.73
5231	52	OJH	MT2	06/20/89	1.198	0.00 > 1.32	0.00 >	0.00
5232	52	OJH	MT2	06/20/89	1.188	0.00 > 3.96	0.00 >	1.75
5233	52	OJL	MT2	06/20/89	0.891	0.00 > 100.00	0.00 >	5.76
5233	52	OJY	MT2	06/21/89	1.113	0.00 > 29.30	0.00 >	0.87
5234	52	OJY	MT2	06/21/89	1.113	0.00 > 17.00	0.00 >	1.18
5234	52	OJZ	MT2	06/21/89	1.133	0.00 > 21.50	0.00 >	0.00
5235	52	OJL	MT2	06/20/89	0.891	0.00 > 4.31	0.00 >	0.00
5235	52	OJL	MT2	06/21/89	1.133	97.00 > 46.00	0.00 >	2.54
5236	52	OJL	MT2	06/20/89	0.927	0.00 > 100.00	0.00 >	3.77
5236	52	OJO	MT2	06/21/89	0.942	0.00 > 23.10	0.00 >	0.60
5237	52	OJL	MT2	06/20/89	0.927	0.00 > 100.00	0.00 >	2.41
5237	52	OJO	MT2	06/21/89	0.942	0.00 > 22.00	0.00 >	4.65
5238	52	OJK	MT2	06/20/89	0.619	0.00 > 22.20	0.00 >	0.07
5238	52	OJN	MT2	06/21/89	0.913	0.00 > 26.40	0.00 >	0.94
5239	52	OJN	MT2	06/21/89	0.913	0.00 > 24.10	0.00 >	4.27
5241	52	OJQ	MT2	06/21/89	0.921	0.00 > 100.00	0.00 >	0.44
5242	52	OJQ	MT2	06/21/89	0.921	0.00 > 22.50	0.00 >	0.00
5243	52	OJN	MT2	06/21/89	1.062	0.00 > 21.50	0.00 >	2.03
5244	52	OJF	MT2	07/10/89	1.135	0.00 > 100.00	0.00 >	5.90
5244	52	OJN	MT2	06/21/89	1.062	0.00 > 21.00	0.00 >	1.43
5247	52	OJN	MT2	06/21/89	1.197	0.00 > 20.80	0.00 >	1.99
5248	52	OJN	MT2	06/21/89	1.197	0.00 > 23.10	0.00 >	5.40
5250	52	OJN	MT2	06/21/89	1.073	0.00 > 18.90	0.00 >	0.00
5251	52	OJN	MT2	06/21/89	1.073	0.00 > 4.94	0.00 >	0.00
5252	52	OJZ	MT2	06/22/89	1.534	0.00 > 22.50	0.00 >	1.28
5253	52	OJZ	MT2	06/22/89	1.534	0.00 > 1.21	0.00 >	0.07
5254	52	OJL	MT2	06/22/89	1.413	0.00 > 53.80	0.00 >	0.00
5255	52	OJL	MT2	06/22/89	1.413	0.00 > 100.00	0.00 >	1.22
5256	52	OJY	MT2	06/22/89	1.570	0.00 > 100.00	0.00 >	1.24

## Cumulative Summary (cont'd)

AVB	Ship- No.	Pit Cell # Line	Test Date	Diff- mtl.	IC 50	TC 25	SI	TAI
5258	52	OL9 HT2	06/22/89	1.570	0.00	5.94	0.00 >	0.10
5260	52	OLA HT2	06/22/89	1.557	0.00 >	100.00	0.00 >	2.46
5261	52	OLA HT2	06/22/89	1.557	0.00 >	100.00	0.00 >	1.50
5262	52	OLB HT2	06/22/89	1.561	0.00	9.50	0.00	0.00
5263	52	OLB HT2	06/22/89	1.561	0.00 >	100.00	0.00 >	6.82
5264	52	OM7 HT2	06/27/89	1.160	0.00	51.30	0.00 >	7.20
5265	52	OMF HT2	07/10/89	1.135	0.00	30.40	0.00 >	2.75
5266	52	OMF HT2	06/27/89	1.160	0.00	5.35	0.00 >	4.84
5267	52	OMG HT2	06/27/89	1.136	0.00 >	100.00	0.00 >	8.51
5269	52	OMG HT2	06/27/89	1.136	0.00 >	100.00	0.00 >	5.90
5270	52	OMG HT2	06/27/89	1.193	0.00	49.30	0.00 >	5.04
5271	52	OMG HT2	06/27/89	1.193	0.00 >	100.00	0.00 >	4.61
5272	52	OMA HT2	06/27/89	1.157	0.00 >	100.00	0.00 >	7.88
5273	52	OMA HT2	06/27/89	1.157	0.00	10.80	0.00 >	2.26
5274	52	OMB HT2	06/27/89	1.192	0.00	1.85	0.00 >	0.81
5275	52	OMB HT2	06/27/89	1.192	0.00	50.60	0.00	0.86
5276	52	OMC HT2	06/28/89	1.176	0.00	5.63	0.00	0.00
5277	52	OMD HT2	06/28/89	1.176	0.00 >	100.00	0.00 >	5.34
5278	52	OME HT2	06/28/89	0.996	0.00 >	100.00	0.00 >	7.99
5279	52	OME HT2	06/28/89	0.996	6.22 >	100.00	> 16.08	> 47.19
5280	52	OMF HT2	06/28/89	1.241	0.00	1.41	0.00	0.97
5281	52	OMF HT2	06/28/89	1.241	0.00	6.29	0.00	0.00
5282	52	OMG HT2	06/28/89	1.243	0.00 >	100.00	0.00	0.95
5283	52	OMG HT2	06/28/89	1.243	0.00 >	100.00	0.00 >	0.40
5284	52	OMG HT2	07/10/89	1.132	0.00 >	100.00	0.00 >	3.89
5285	52	OMG HT2	07/10/89	1.132	0.00	4.92	0.00 >	2.87
5286	52	OMH HT2	07/10/89	1.188	0.00 >	100.00	0.00 >	2.10
5289	52	OMH HT2	07/10/89	1.188	0.00	24.10	0.00	1.23
5290	52	OMI HT2	07/10/89	1.238	0.00 >	100.00	0.00 >	0.46
5291	52	OMI HT2	07/10/89	1.238	0.00 >	100.00	0.00	0.63
5292	52	OMK HT2	07/10/89	1.123	0.00 >	100.00	0.00 >	3.72
5294	52	OML HT2	07/10/89	1.175	0.00 >	100.00	0.00 >	1.89
5296	52	OML HT2	07/10/89	1.186	0.00 <	0.32	0.00	0.00
5297	52	OMM HT2	07/10/89	0.919	0.00 >	100.00	0.00 >	1.36
5298	52	OMM HT2	07/10/89	0.919	0.00 >	100.00	0.00 >	3.20
5299	52	OMM HT2	07/10/89	0.949	0.00	51.10	0.00 >	2.20
5300	52	OMM HT2	07/10/89	0.949	0.00	18.60	0.00	0.40
5301	52	OMY HT2	07/05/89	1.676	0.00	50.50	0.00	0.53
5302	52	OMY HT2	07/05/89	1.676	0.00 >	100.00	0.00 >	2.43
5303	52	OMZ HT2	07/05/89	1.550	0.00	5.70	0.00	0.00
5304	52	OMZ HT2	07/05/89	1.550	0.00	15.50	0.00 >	1.71
5305	52	OMO HT2	07/05/89	1.649	0.00	4.59	0.00 >	2.69
5307	52	OMO HT2	07/05/89	1.649	0.00	2.28	0.00	1.06
5308	52	OM1 HT2	07/05/89	1.756	0.00	7.24	0.00 >	4.74
5309	52	OM1 HT2	07/05/89	1.756	0.00	6.41	0.00	4.01
5310	52	OM2 HT2	07/05/89	1.370	0.00 >	100.00	0.00 >	2.10
5312	53	O10 HT2	05/24/89	1.629	0.00 >	100.00	0.00 >	4.50
5314	53	O10 HT2	05/24/89	1.629	0.00 >	100.00	0.00 >	0.03
5315	53	O1R HT2	05/24/89	1.511	0.00 >	100.00	0.00 >	3.30
5316	53	O1R HT2	05/24/89	1.511	0.00 >	100.00	0.00 >	1.35
5317	53	O1S HT2	05/24/89	1.517	0.00 >	100.00	0.00 >	1.70
5318	53	O1S HT2	05/24/89	1.517	0.00 >	100.00	0.00 >	1.00
5319	53	O1T HT2	05/24/89	1.511	0.00 >	100.00	0.00	1.32
5320	53	O1T HT2	05/24/89	1.511	0.00 >	100.00	0.00	0.00
5321	53	O1U HT2	05/24/89	1.340	0.00 >	100.00	0.00 >	2.10
5322	53	O1U HT2	05/24/89	1.340	0.00	1.60	0.00 >	0.60
5323	53	OJU HT2	05/25/89	1.338	0.00	16.50	0.00	0.13
5324	53	OJU HT2	05/25/89	1.338	0.00	55.00	0.00 >	0.30
5326	53	OJU HT2	05/25/89	1.310	0.00	14.80	0.00	0.27
5327	53	OJU HT2	05/25/89	1.366	0.00	12.50	0.00 >	0.10
5328	53	OMD HT2	05/25/89	1.366	0.00 >	100.00	0.00	0.11
5329	53	OMX HT2	05/25/89	1.270	0.00	13.90	0.00	0.97
5330	53	OMX HT2	05/25/89	1.270	0.00 >	100.00	0.00 >	2.50
5331	53	OMY HT2	05/25/89	1.540	0.00	5.01	0.00	0.00
5332	53	OMY HT2	05/25/89	1.540	0.00	5.56	0.00	0.65
5333	53	OJ2 HT2	05/25/89	1.369	0.00 >	100.00	0.00	0.00
5335	53	OJ2 HT2	05/25/89	1.369	0.00	3.78	0.00	0.00
5336	53	OK0 HT2	05/25/89	1.400	0.00	74.50	0.00 >	0.15
5337	53	OK0 HT2	05/25/89	1.400	0.00	85.70	0.00	0.45
5338	53	OK1 HT2	05/25/89	1.273	0.00 >	100.00	0.00 >	1.57
5341	53	OMA HT2	05/23/89	1.022	0.00	16.00	0.00 >	3.20
5342	53	OMB HT2	05/23/89	1.159	0.00 >	100.00	0.00 >	1.86
5344	53	OMB HT2	05/23/89	1.159	0.00 >	100.00	0.00 >	0.93
5345	53	OMC HT2	05/23/89	1.117	0.00 >	100.00	0.00 >	0.56
5346	53	OMC HT2	05/23/89	1.117	0.00	22.20	0.00 >	0.10
5347	53	OMD HT2	05/23/89	0.996	0.00 >	73.50	0.00	1.52
5348	53	OMD HT2	05/23/89	0.996	0.00 >	100.00	0.00 >	2.65
5349	53	OME HT2	05/23/89	0.997	0.00	18.20	0.00 >	1.10

## Cumulative Summary (cont'd)

AVG No.	SHIP- ment	PLT/COLL # Line	Test Date	Diff- mtl.	TC 50	TC 25	SI	TAI
5350	53	OHO MT2	05/23/89	0.997	0.00	49.70	0.00	> 2.60
5351	53	OHO MT2	05/24/89	1.230	0.00	13.40	0.00	0.00
5352	53	OHO MT2	05/24/89	1.230	0.00	5.17	0.00	0.12
5353	53	OHO MT2	05/24/89	1.359	0.00	> 100.00	0.00	> 0.55
5354	53	OHO MT2	05/24/89	1.359	0.00	> 100.00	0.00	> 0.20
5355	53	OHO MT2	05/24/89	1.302	0.00	14.70	0.00	0.00
5356	53	OHO MT2	05/24/89	1.302	0.00	50.90	0.00	0.30
5357	53	OHO MT2	05/24/89	1.291	0.00	> 100.00	0.00	> 1.23
5358	54	OOL2 MT2	07/19/89	0.946	0.00	66.00	0.00	2.93
5358	54	1LS MT2	05/10/90	0.929	0.00	52.00	0.00	> 6.61
5359	54	002 MT2	07/19/89	0.946	0.00	38.70	0.00	6.82
5359	54	1LS MT2	05/10/90	0.929	0.00	55.60	0.00	> 9.15
5360	54	003 MT2	07/19/89	2.387	0.00	5.78	0.00	0.11
5360	54	1LT MT2	05/10/90	0.867	<	0.32	52.70	> 164.56 > 85.49
5360	54	1SL MT2	07/17/90	0.942	0.00	4.41	2923.0	62.82
5405	53	OAT MT2	03/32/89	1.353	0.00	<	0.32	0.00
5405	53	OGO MT2	05/16/89	1.263	0.00	<	0.32	0.00
5405	66	1PO MT2	06/05/90	1.311	0.00	0.41	0.00	0.00
5406	65	207 CEM	08/07/90	1.122	0.00	> 100.00	0.00	> 7.67
5406	65	238 CEM	08/16/90	0.711	0.00	> 100.00	0.00	> 4.76
5406	94	092 MT2	03/16/89	1.265	45.90	> 100.00	>	2.18 > 18.05
5406	94	097 MT2	08/01/89	1.151	0.00	> 100.00	0.00	> 3.00
5406	94	184 MT2	05/16/90	0.991	0.00	> 100.00	0.00	> 7.00
5407	94	092 MT2	03/16/89	1.245	0.00	> 100.00	0.00	> 1.70
5408	94	093 MT2	03/16/89	1.278	0.00	> 100.00	0.00	> 0.93
5412	94	093 MT2	03/16/89	1.278	0.00	> 100.00	0.00	> 1.60
5413	94	094 MT2	03/16/89	1.261	0.00	> 100.00	0.00	> 3.29
5414	94	094 MT2	03/16/89	1.261	0.00	15.90	0.00	2.33
5415	94	095 MT2	03/16/89	1.309	0.00	16.30	0.00	> 10.65
5416	94	095 MT2	03/16/89	1.309	0.00	17.50	0.00	5.42
5417	94	096 MT2	03/16/89	1.449	57.20	> 100.00	>	1.75 > 10.41
5417	94	097 MT2	08/01/89	1.151	0.00	> 100.00	0.00	> 3.51
5418	94	097 MT2	03/16/89	1.360	0.00	0.90	0.00	0.00
5419	94	097 MT2	03/16/89	1.380	0.00	> 100.00	0.00	> 1.07
5420	24	098 MT2	03/16/89	1.450	0.00	> 100.00	0.00	> 1.29
5421	94	098 MT2	03/16/89	1.450	10.00	11.10	1.11	5.48
5422	94	099 MT2	03/16/89	1.455	0.00	7.12	0.00	0.00
5423	94	099 MT2	03/16/89	1.455	0.00	8.21	0.00	0.04
5424	94	09A MT2	03/16/89	1.309	0.00	36.40	0.00	0.21
5425	94	09A MT2	03/16/89	1.309	0.00	51.50	0.00	0.07
5426	53	OAT MT2	03/30/89	1.353	0.00	> 100.00	0.00	5.61
5426	53	OGU MT2	05/16/89	1.263	0.00	> 100.00	0.00	> 3.90
5427	53	OBR MT2	04/04/89	1.299	0.00	> 100.00	0.00	> 3.90
5428	53	OBR MT2	04/06/89	1.299	0.00	> 100.00	0.00	> 1.64
5429	53	OBS MT2	04/06/89	1.212	0.00	> 100.00	0.00	> 0.60
5430	53	OBC MT2	04/06/89	1.212	0.00	52.50	0.00	0.21
5431	53	OBT MT2	04/06/89	1.126	0.00	> 100.00	0.00	> 2.40
5432	53	OBT MT2	04/06/89	1.126	0.00	> 100.00	0.00	> 1.16
5433	53	OBU MT2	04/06/89	1.185	0.00	> 100.00	0.00	> 1.00
5434	53	OBU MT2	04/06/89	1.185	0.00	> 100.00	0.00	> 0.10
5435	53	OBY MT2	04/06/89	1.131	0.00	> 100.00	0.00	> 6.19
5436	53	OBY MT2	04/06/89	1.131	0.00	> 100.00	0.00	> 5.91
5437	53	DFJ MT2	05/10/89	1.157	0.00	45.00	0.00	0.52
5438	53	OHP MT2	05/24/89	1.291	0.00	<	0.32	0.00
5438	53	120 MT2	11/07/89	1.428	0.00	0.02	0.00	0.00
5439	53	OHO MT2	05/24/89	1.339	0.00	19.30	0.00	0.00
5440	53	OHW MT2	05/24/89	1.339	0.00	<	0.32	0.00
5441	53	OHW MT2	05/24/89	1.425	0.00	1.30	0.00	0.00
5442	53	OHR MT2	05/24/89	1.425	0.00	<	0.32	0.00
5443	53	OLT MT2	06/20/89	0.865	0.00	<	0.32	0.00
5443	53	10L MT2	10/26/89	1.153	0.00	0.05	0.00	0.00
5444	53	OLU MT2	06/20/89	0.759	0.00	<	0.32	0.00
5444	53	10K MT2	10/26/89	1.153	0.00	0.01	0.00	0.00
5445	53	OLU MT2	06/20/89	0.759	0.00	<	0.32	0.00
5445	53	10L MT2	10/26/89	1.241	0.00	<	0.00	0.00
5445	53	11U MT2	11/07/89	1.431	0.00	<	0.00	0.00
5446	53	OLV MT2	06/20/89	0.851	0.00	<	0.32	0.00
5446	53	10J MT2	10/26/89	1.241	0.00	0.05	0.00	0.15
5447	53	OLV MT2	06/20/89	0.851	0.00	<	0.32	0.00
5447	53	10J MT2	10/26/89	1.204	0.00	0.02	0.00	0.00
5449	53	OHI MT2	06/28/89	1.287	0.00	45.70	0.00	0.00
5449	53	14A MT2	12/05/89	1.146	0.00	>	1.00	0.00
5450	53	OHI MT2	06/28/89	1.287	0.00	19.20	0.00	0.00
5450	53	14B MT2	12/05/89	1.278	0.00	>	1.00	0.00 > 2.13
5451	53	OHH MT2	07/05/89	1.377	0.00	15.70	0.00	0.00
5452	53	OHP MT2	06/20/89	1.194	0.00	6.74	0.00	> 2.61
5452	53	122 MT2	11/07/89	0.859	0.00	>	1.00	0.00
5453	53	OHP MT2	06/20/89	1.194	0.00	17.10	0.00	> 0.50

## Cumulative Summary (Cont'd)

AVB	Ship- No.	Plt Cell Line	Test Date	Diff- mtl.	IC 50	TC 25	SI	TAI
5454	54	OQJ MT2	07/19/89	0.887	0.00	< 0.32	0.00	0.00
5455	54	OQ4 MT2	07/19/89	0.613	51.90	> 100.00	> 1.93	> 18.86
5457	54	OQS MT2	07/19/89	0.928	0.00	< 1.56	0.00	0.00
5458	54	OQS MT2	07/19/89	0.923	0.00	< 0.32	0.00	0.00
5459	54	OQE MT2	07/19/89	0.795	0.00	< 16.50	0.00	> 1.70
5460	54	OQE MT2	07/19/89	0.795	< 0.32	> 77.90	> 243.58	> 81.39
5460	54	OQE MT2	08/08/89	1.465	0.00	< 0.28	0.00	> 0.82
5460	54	OQE MT2	08/08/89	1.505	0.00	< 15.00	0.00	> 0.80
5460	54	OQP MT2	08/17/89	1.514	0.00	< 2.45	0.00	> 19.48
5460	54	OQP MT2	08/17/89	1.389	0.00	< 5.30	0.00	> 3.14
5460	65	1W5 MT2	05/16/90	1.100	0.00	< 5.63	0.00	0.00
5461	54	OPE MT2	08/09/89	1.364	0.00	< 15.70	0.00	> 14.11
5462	54	OPE MT2	08/09/89	1.364	0.00	< 5.27	0.00	> 6.13
5463	54	OPE MT2	08/09/89	1.645	0.00	< 15.80	0.00	> 6.88
5464	74	352 CEM	11/13/90	0.718	0.00	< 17.30	0.00	0.00
5464	65	4CJ CEM	02/20/91	0.879	0.00	< 5.75	0.00	> 0.01
5464	54	OPE MT2	08/09/89	1.645	0.00	< 16.00	0.00	> 6.94
5464	74	341 MT2	11/13/90	1.177	0.00	< 16.50	0.00	0.00
5464	65	4CJ MT2	02/20/91	1.417	0.00	< 3.91	0.00	0.00
5465	65	22U CEM	06/15/90	1.046	0.00	< 9.28	0.00	0.00
5465	54	OPI MT2	08/09/89	1.640	0.00	< 15.10	0.00	0.00
5466	54	OPI MT2	08/09/89	1.640	0.00	< 0.32	0.00	0.00
5467	54	OPI MT2	08/09/89	1.562	0.00	< 0.32	0.00	0.00
5468	54	OPI MT2	08/09/89	1.562	0.00	< 0.32	0.00	0.00
5469	54	OPI MT2	08/09/89	1.605	0.00	< 0.32	0.00	0.00
5469	65	1W5 MT2	05/16/90	1.100	0.00	< 0.32	0.00	0.00
5469	65	119 MT2	07/18/90	1.039	0.00	< 2.04	0.00	> 2.56
5470	54	OPI MT2	08/09/89	1.606	0.00	< 0.32	0.00	0.00
5470	65	1W6 MT2	05/16/90	1.127	0.00	< 0.32	0.00	0.00
5470	65	17A MT2	07/18/90	1.145	0.00	< 0.63	0.00	> 1.32
5472	54	OPI MT2	08/01/89	1.204	0.00	< 0.32	0.00	0.00
5474	54	OPI MT2	08/01/89	1.173	0.00	> 100.00	0.00	> 4.84
5475	54	OPI MT2	08/01/89	1.173	0.00	< 0.32	0.00	0.00
5476	54	OPI MT2	08/01/89	1.239	0.00	< 15.30	0.00	> 5.11
5477	54	OPI MT2	08/01/89	1.239	0.00	< 0.51	0.00	0.00
5478	54	OPI MT2	08/03/89	1.106	0.00	< 1.13	0.00	> 0.27
5479	54	OPI MT2	08/03/89	1.106	0.00	< 14.10	0.00	> 7.52
5480	53	OAG MT2	03/29/89	1.207	0.00	> 100.00	0.00	> 1.18
5481	53	OAG MT2	03/29/89	1.178	0.00	> 100.00	0.00	> 1.35
5482	66	22S CEM	08/14/90	0.885	0.00	> 100.00	0.00	> 0.50
5482	53	OAG MT2	03/29/89	1.178	0.00	> 100.00	0.00	> 0.50
5482	66	1PG MT2	06/05/90	1.011	0.00	> 100.00	0.00	> 10.40
5483	53	OAI MT2	03/29/89	1.185	0.00	< 0.32	0.00	0.00
5486	53	OAI MT2	03/29/89	1.185	0.00	< 74.90	0.00	> 2.82
5484	66	1PA MT2	06/05/90	1.013	0.00	> 100.00	0.00	> 7.73
5485	53	OAI MT2	03/29/89	1.268	0.00	< 1.44	0.00	> 0.28
5485	66	1PA MT2	06/05/90	1.013	0.00	< 0.89	0.00	0.00
5487	53	OAI MT2	03/29/89	1.268	0.00	< 9.20	0.00	> 0.71
5488	53	OAK MT2	03/29/89	1.171	0.00	> 100.00	0.00	> 4.19
5488	66	1PA MT2	06/05/90	0.974	0.00	> 100.00	0.00	> 7.30
5489	53	OAK MT2	03/29/89	1.171	0.00	> 100.00	0.00	> 2.22
5489	66	1PA MT2	06/05/90	0.974	0.00	< 9.20	0.00	> 2.93
5490	53	OFL MT2	05/10/89	1.157	0.00	< 5.29	0.00	> 1.64
5491	53	OFL MT2	05/10/89	1.218	0.00	< 25.10	0.00	> 2.56
5492	53	OFL MT2	05/10/89	1.218	0.00	< 52.70	0.00	> 1.51
5493	53	OFL MT2	05/10/89	1.182	0.00	< 32.00	0.00	0.00
5494	53	OFL MT2	05/10/89	1.182	0.00	< 85.10	0.00	> 0.22
5495	53	OFL MT2	05/10/89	1.116	0.00	< 3.68	0.00	0.00
5496	53	OFL MT2	05/10/89	1.116	0.00	> 100.00	0.00	> 0.13
5497	66	1V6 CEM	07/24/90	0.782	0.00	< 100.00	0.00	> 10.81
5497	53	OFL MT2	05/10/89	1.165	0.00	< 49.40	0.00	> 1.81
5498	66	1PC MT2	06/05/90	1.052	0.00	< 100.00	0.00	> 8.59
5498	66	22S CEM	08/14/90	0.885	0.00	< 100.00	0.00	0.00
5498	53	OFL MT2	05/10/89	1.165	0.00	< 38.70	0.00	> 0.07
5498	66	1PC MT2	06/05/90	1.052	0.00	< 100.00	0.00	> 5.40
5499	53	OCH MT2	04/11/89	1.803	0.00	< 100.00	0.00	> 4.39
5500	53	OCH MT2	04/11/89	1.803	0.00	< 0.32	0.00	0.00
5500	66	1PO MT2	06/05/90	0.969	0.00	< 0.32	0.00	0.00
5501	53	OCH MT2	04/11/89	1.638	0.00	< 5.70	0.00	> 1.77
5501	66	1PO MT2	06/05/90	0.969	0.00	< 14.50	0.00	> 5.98
5502	53	OCH MT2	04/11/89	1.638	0.00	< 38.90	0.00	> 1.38
5503	53	OCH MT2	04/11/89	1.771	0.00	< 17.40	0.00	> 1.06
5503	64	1PO MT2	06/07/90	1.105	0.00	< 16.70	0.00	0.00
5504	53	OCP MT2	04/11/89	1.771	0.00	< 77.30	0.00	> 4.30
5505	53	OCP MT2	04/11/89	1.825	0.00	< 16.90	0.00	> 1.20
5506	53	OCP MT2	04/11/89	1.825	0.00	< 16.60	0.00	> 0.80
5507	53	OCP MT2	04/11/89	1.679	0.00	< 35.70	0.00	> 2.81
5507	66	OCP MT2	04/07/90	1.105	0.00	< 58.20	0.00	> 0.41

## CUMULATIVE SUMMARY (cont'd)

AVB No.	Ship- ment	Plt Cell & Line	Test Date	Diff- mtl.	IC 50	TC 25	\$1	TAS
5508 53		OCE MT2	06/11/89	1.679	0.00	35.40	0.00 >	2.69
5508 66		1PP MT2	06/07/90	1.153	0.00	26.70	0.00	0.26
5509 53		OFG MT2	05/09/89	1.087	0.00 >	100.00	0.00 >	0.59
5509 53		OFA MT2	08/09/89	1.299	0.00 >	100.00	0.00 >	5.13
5510 53		OFE MT2	05/09/89	1.129	0.00 >	100.00	0.00 >	0.50
5510 53		OFO MT2	08/09/89	1.299	0.00 >	100.00	0.00 >	3.96
5511 53		OFE MT2	05/09/89	1.129	0.00 >	100.00	0.00 >	0.90
5511 53		OOF MT2	08/09/89	1.137	0.00 >	100.00	0.00 >	0.80
5512 53		OFF MT2	05/09/89	0.974	0.00 >	100.00	0.00 >	5.59
5512 53		OOF MT2	08/09/89	1.137	0.00 >	100.00	0.00 >	0.50
5513 53		OFF MT2	05/09/89	0.974	0.00 >	60.80	0.00 >	5.41
5514 53		OFG MT2	05/09/89	1.062	0.00 >	1.60	0.00	0.00
5515 53		OFG MT2	05/09/89	1.062	0.00 >	13.10	0.00	0.00
5515 53		OGB MT2	08/09/89	1.238	0.00 >	16.50	0.00	0.12
5516 53		OFA MT2	05/09/89	1.112	0.00 >	100.00	0.00	0.43
5516 53		OGB MT2	08/09/89	1.238	0.00 >	100.00	0.00 >	2.00
5517 53		OFA MT2	05/09/89	1.112	0.00 >	100.00	0.00 >	0.05
5517 66		1PP MT2	06/07/90	1.153	0.00 >	100.00	0.00	0.00
5518 56		OOG MT2	07/23/89	0.837	0.00 >	100.00	0.00 >	1.23
5519 56		OOG MT2	07/25/89	0.773	0.00 >	100.00	0.00	1.40
5520 56		OOR MT2	07/25/89	0.773	0.00 >	100.00	0.00	0.80
5521 56		OOS MT2	07/25/89	0.776	0.00 >	100.00	0.00 >	11.10
5522 56		OOS MT2	07/25/89	0.776	0.00 >	1.97	0.00	0.00
5523 56		OOT MT2	07/25/89	0.867	0.00 >	100.00	0.00	0.38
5524 56		OOT MT2	07/25/89	0.867	0.00 >	100.00	0.00	1.12
5525 56		OOU MT2	07/25/89	0.866	0.00 >	100.00	0.00 >	4.90
5526 56		OOU MT2	07/25/89	0.866	0.00 >	57.80	0.00	1.20
5527 56		OOC MT2	07/20/89	1.188	0.00 >	100.00	0.00	0.00
5528 56		OOB MT2	07/20/89	1.188	0.00 >	100.00	0.00 >	1.11
5529 55		OOG MT2	07/20/89	1.270	0.00 >	100.00	0.00	2.67
5530 56		OOG MT2	07/20/89	1.270	0.00 >	7.11	0.00 >	1.66
5531 56		OOA MT2	07/20/89	1.171	0.00 >	21.00	0.00 >	7.56
5532 56		OOG MT2	07/20/89	1.171	0.00 >	100.00	0.00 >	6.20
5533 56		OOB MT2	07/20/89	1.203	0.00 >	100.00	0.00 >	0.30
5534 56		OOB MT2	07/20/89	1.203	0.00 >	100.00	0.00 >	0.15
5535 56		OOC MT2	07/20/89	1.148	0.00 >	100.00	0.00 >	0.30
5536 56		OOC MT2	07/20/89	1.148	0.00 >	100.00	0.00 >	0.82
5539 56		OPI MT2	07/25/89	0.740	0.00 <	0.32	0.00	0.00
5540 56		OPI MT2	07/25/89	0.740	0.00 >	100.00	0.00	0.72
5543 56		OPI MT2	07/25/89	0.831	0.00 >	5.07	0.00	1.11
5544 56		OPI MT2	07/25/89	0.831	0.00 >	15.50	0.00	0.00
5545 56		OPI MT2	07/25/89	0.837	0.00 >	100.00	0.00 >	0.70
5546 56		OPI MT2	07/25/89	0.837	0.00 >	100.00	0.00	3.71
5547 56		OOW MT2	07/26/89	0.815	0.00 >	69.80	0.00	1.48
5548 56		OOW MT2	07/26/89	0.815	0.00 >	19.00	0.00 >	2.31
5549 10A		OIA MT2	05/22/89	1.224	0.00 >	100.00	0.00 >	5.61
5550 10A		OIB MT2	05/22/89	1.059	0.00 >	100.00	0.00 >	9.70
5552 10A		OIB MT2	05/22/89	1.059	0.00 >	100.00	0.00 >	7.20
5552 52		OIO MT2	08/01/89	1.223	0.00 >	100.00	0.00 >	0.93
5554 10A		OIC MT2	05/22/89	1.239	0.00 >	100.00	0.00 >	6.30
5555 53		OAU MT2	03/30/89	1.311	0.00 >	10.00	0.00	0.00
5555 53		OCP MT2	05/16/89	1.278	0.00 >	100.00	0.00	0.60
5556 53		OAU MT2	03/30/89	1.311	0.00 >	10.00	0.00 >	3.69
5556 53		OCP MT2	05/16/89	1.278	0.00 <	0.32	0.00	0.00
5556 53		148 MT2	12/05/89	1.278	0.00 >	1.00	0.00	1.31
5557 53		OAV MT2	03/30/89	1.241	0.00 >	0.15	0.00 >	0.30
5557 53		OCP MT2	05/16/89	1.226	0.00 >	1.70	0.00 >	0.30
5558 53		OAV MT2	03/30/89	1.241	0.00 >	1.56	0.00	2.71
5558 53		OCP MT2	05/16/89	1.226	0.00 <	0.32	0.00	0.00
5559 53		OAW MT2	03/30/89	1.286	0.00 >	6.99	0.00 >	6.97
5559 53		OCP MT2	05/16/89	1.284	0.00 >	15.30	0.00	3.39
5560 53		OAW MT2	03/30/89	1.286	2.22 >	10.00	4.51 >	30.15
5560 53		OCP MT2	05/16/89	1.284	0.00 >	13.50	0.00 >	2.72
5561 53		OAW MT2	03/30/89	1.300	0.00 >	10.00	0.00	4.71
5561 53		OGB MT2	05/16/89	1.424	0.00 >	6.41	0.00	0.00
5562 53		OAW MT2	03/30/89	1.300	0.00 >	1.59	0.00 >	10.17
5562 53		OGB MT2	05/16/89	1.424	0.00 >	4.87	0.00	0.00
5563 11A	105	CER	10/17/90	1.86	> 100.00	0.00	0.00 >	0.16
5563 11A	11G	MT2	10/31/90	1.00	> 100.00	0.00	0.00 >	1.30
5567 54		OOK MT2	07/26/89	0.964	0.00 >	67.70	0.00	0.35
5568 54		OOK MT2	07/26/89	0.964	0.00 >	59.90	0.00	0.00
5569 54		OVT MT2	07/26/89	0.920	0.00 >	49.80	0.00	0.00
5570 54		OVT MT2	07/26/89	0.920	0.00 >	100.00	0.00 >	1.80
5571 54		OQ2 MT2	07/26/89	1.063	0.00 >	97.00	0.00	0.00
5572 54		OQ2 MT2	07/26/89	1.063	0.00 >	100.00	0.00	0.00
5573 54		OPO MT2	07/26/89	1.058	0.00 >	6.31	0.00	0.00
5574 54		OPO MT2	07/26/89	1.058	0.00 >	100.00	0.00 >	1.90
5575 54		OPO MT2	07/26/89	1.181	0.00 >	11.60	0.00	0.72

## CUMULATIVE SUMMARY (cont'd)

AV#	Ship/ No.	Plt/Coll ment	Test S Line	Diff- Date	Diff- mtl.	TC 50	TC 25	\$1	TAI
5576	56	068	HT2	07/26/89	1.181	0.00	< 0.32	0.00	0.30
5577	56	069	HT2	07/26/89	1.178	0.00	> 51.80	0.00	0.57
5578	56	105	HT2	07/26/89	1.178	0.00	> 68.20	0.00	0.77
5579	14A	10X	HT2	02/08/90	1.198	0.00	< 0.32	0.00	0.00
5579	62	10X	HT2	02/27/90	1.121	0.00	> 0.23	0.00	0.00
5583	56	06A	HT2	07/26/89	1.192	0.00	> 100.00	0.00	> 1.13
5584	56	06A	HT2	07/26/89	1.192	0.00	> 100.00	0.00	> 0.98
5585	56	06B	HT2	07/26/89	1.290	0.00	> 100.00	0.00	> 0.32
5586	56	06B	HT2	07/26/89	1.290	0.00	> 100.00	0.00	> 0.65
5587	56	06C	HT2	07/26/89	1.199	0.00	> 100.00	0.00	> 0.13
5601	67	10J	HT2	07/25/90	1.212	0.00	> 49.50	0.00	> 6.56
5602	67	22Z	CEM	08/14/90	1.102	0.00	> 100.00	0.00	> 1.61
5602	67	10K	HT2	07/25/90	1.115	0.00	> 100.00	0.00	> 5.50
5603	65	12J	HT2	06/18/90	1.030	0.00	> 1.30	0.00	> 0.10
5604	73	20J	CEM	09/23/90	0.966	0.00	> 100.00	0.00	> 0.30
5606	73	26Z	HT2	09/28/90	0.999	0.00	> 100.00	0.00	> 3.06
5679	65	206	CEM	08/07/90	1.105	0.00	> 50.30	0.00	> 0.65
5679	65	106	HT2	05/16/90	1.127	0.00	> 80.00	0.00	> 3.17
5680	57	141	HT2	05/09/90	1.045	0.00	> 1.65	0.00	> 0.10
5681	57	141	HT2	05/09/90	1.045	0.00	> 82.00	0.00	> 5.90
5683	57	07T	HT2	08/30/89	1.278	0.00	> 15.30	0.00	> 3.52
5684	57	07J	HT2	08/23/89	1.319	0.00	> 100.00	0.00	> 2.19
5685	57	07J	HT2	08/23/89	1.319	0.00	> 100.00	0.00	> 2.80
5686	57	07K	HT2	08/23/89	1.300	0.00	> 62.40	0.00	> 6.25
5687	57	07K	HT2	08/23/89	1.300	0.00	> 47.40	0.00	> 0.00
5688	57	07L	HT2	08/23/89	1.269	0.00	> 100.00	0.00	> 6.01
5690	57	07L	HT2	08/23/89	1.269	0.00	> 100.00	0.00	> 3.51
5691	65	22T	CEM	04/15/90	0.961	7.78	> 100.00	> 13.74	> 45.29
5691	57	07M	HT2	08/23/89	1.271	4.52	> 100.00	> 20.75	> 52.51
5692	57	07M	HT2	08/23/89	1.271	0.00	> 100.00	0.00	> 2.30
5693	57	07N	HT2	08/23/89	1.300	0.00	> 100.00	0.00	> 2.34
5694	57	07N	HT2	08/23/89	1.300	0.00	> 100.00	0.00	> 2.85
5695	57	05S	HT2	08/23/89	1.361	0.00	> 6.29	0.00	> 3.36
5696	57	05S	HT2	08/23/89	1.361	0.00	> 0.89	0.00	> 0.39
5697	57	05T	HT2	08/23/89	1.264	0.00	> 29.30	0.00	> 2.05
5698	57	05T	HT2	08/23/89	1.264	0.00	> 64.90	0.00	> 1.83
5699	57	05U	HT2	08/23/89	1.218	0.00	> 25.70	0.00	> 0.00
5700	57	05U	HT2	08/23/89	1.218	0.00	> 100.00	0.00	> 0.10
5701	57	05V	HT2	08/23/89	1.090	0.00	> 100.00	0.00	> 2.50
5702	57	05V	HT2	08/23/89	1.090	0.00	> 100.00	0.00	> 3.80
5703	57	05W	HT2	08/23/89	1.144	0.00	> 100.00	0.00	> 1.60
5704	57	05X	HT2	08/24/89	0.932	0.00	> 100.00	0.00	> 3.44
5705	57	05X	HT2	08/24/89	0.932	0.00	> 7.56	0.00	> 0.00
5706	57	004	HT2	08/24/89	0.993	0.00	> 49.50	0.00	> 0.63
5707	57	004	HT2	08/24/89	0.993	0.00	> 100.00	0.00	> 0.60
5708	57	005	HT2	08/24/89	0.948	0.00	> 100.00	0.00	> 2.00
5709	57	005	HT2	08/24/89	0.948	0.00	> 12.30	0.00	> 0.10
5710	57	006	HT2	08/24/89	0.979	0.00	> 17.50	0.00	> 1.22
5711	58	006	HT2	08/31/89	1.304	0.00	> 18.10	0.00	> 1.00
5712	58	006	HT2	08/31/89	1.304	0.00	> 100.00	0.00	> 0.00
5713	58	10G	HT2	05/10/90	0.857	0.00	> 100.00	0.00	> 5.95
5714	58	10G	HT2	05/10/90	0.857	0.00	> 1.55	0.00	> 1.21
5715	58	10H	HT2	05/10/90	0.794	0.00	> 69.00	0.00	> 2.00
5717	58	10H	HT2	05/10/90	0.794	0.00	> 44.50	0.00	> 0.00
5718	58	10P	HT2	05/24/90	1.234	0.00	> 100.00	0.00	> 0.07
5719	58	10P	HT2	05/24/90	1.234	0.00	> 46.90	0.00	> 0.00
5720	58	10P	HT2	05/24/90	1.190	0.00	> 18.60	0.00	> 1.91
5721	58	10Q	HT2	05/24/90	1.190	0.00	> 15.50	0.00	> 2.40
5723	58	10R	HT2	05/24/90	1.193	0.00	> 2.20	0.00	> 0.50
5726	58	10R	HT2	05/24/90	1.193	0.00	> 45.10	0.00	> 1.92
5727	58	102	HT2	05/24/90	1.221	0.00	> 49.00	0.00	> 0.30
5728	58	102	HT2	05/24/90	1.221	0.00	> 100.00	0.00	> 1.30
5729	58	103	HT2	05/24/90	1.248	0.00	> 100.00	0.00	> 1.56
5729	58	103	HT2	05/24/90	1.248	0.00	> 100.00	0.00	> 2.40
5730	58	104	CEM	07/24/90	0.782	0.00	> 100.00	0.00	> 2.95
5730	58	103	HT2	05/24/90	1.248	0.00	> 100.00	0.00	> 3.17
5731	58	0040	HT2	09/05/89	1.260	0.00	> 100.00	0.00	> 2.58
5732	58	0040	HT2	09/05/89	1.260	5.39	> 100.00	> 18.55	> 7.21
5732	58	02A	HT2	10/17/89	1.310	0.00	> 1.84	0.00	> 1.81
5733	58	104	HT2	05/24/90	1.231	58.60	> 100.00	> 1.71	> 10.66
5733	58	104	HT2	07/17/90	0.931	24.50	> 325.00	12.26	> 20.53
5734	58	104	HT2	05/24/90	1.231	0.00	> 49.50	0.00	> 2.50
5735	58	004C	HT2	09/05/89	1.264	21.50	> 100.00	> 4.64	> 22.79
5735	58	02A	HT2	10/17/89	1.310	0.00	> 5.74	0.00	> 0.96
5736	58	004C	HT2	09/05/89	1.266	0.00	> 49.50	0.00	> 0.00
5737	58	004D	HT2	09/05/89	1.270	15.80	> 100.00	> 6.33	> 31.00
5738	58	004D	HT2	09/05/89	1.270	0.00	> 14.70	0.00	> 0.11
5742	58	10W	CEM	07/24/90	0.711	0.00	> 47.00	0.00	> 30.31

## Cumulative Summary (cont'd)

AV#	Ship- ment	Pit Call #	Date	Diff. mtl.	TC 50	TC 25	\$1	TAC
5742	58	105	MT2	05/24/90	1.265	0.00	47.40	0.00 > 11.52
5743	58	048	MT2	09/05/89	1.188	0.00	18.50	0.00 > 0.75
5744	58	028	MT2	10/17/89	1.307	0.00	29.60	0.00 > 0.30
5745	58	068	MT2	09/07/89	1.702	0.00	16.90	0.00 > 0.23
5746	58	048	MT2	09/07/89	1.702	0.00	12.40	0.00 > 1.87
5747	58	048	MT2	09/07/89	1.664	0.00	21.70	0.00 > 0.30
5748	58	048	MT2	09/07/89	1.664	0.00	36.30	0.00 > 0.30
5749	58	048	MT2	09/07/89	1.665	0.00	42.50	0.00 > 0.30
5750	58	048	MT2	09/07/89	1.665	0.00	53.00	0.00 > 1.80
5751	59	048	MT2	09/07/89	1.761	0.00	31.10	0.00 > 0.30
5752	59	048	MT2	09/07/89	1.761	0.00	8.23	0.00 > 0.30
5753	59	107	MT2	05/24/90	1.097	0.00 > 160.00	0.00 > 4.39	
5755	59	108	MT2	05/30/90	1.128	0.00	33.10	0.00 > 0.30
5756	59	108	MT2	05/30/90	1.128	0.00 > 100.00	0.00 > 0.30	
5757	59	108	MT2	05/30/90	1.119	0.00 > 100.00	0.00 > 0.30	
5757	59	1RE	MT2	07/03/90	1.128	0.00 > 100.00	0.00 > 0.15	
5758	59	23E	CEM	08/16/90	0.711	17.90 > 100.00	5.59 > 27.18	
5758	59	108	MT2	05/30/90	1.119	0.00 > 37.10	0.00 > 2.91	
5759	59	020	MT2	10/17/89	1.281	0.00	1.43	0.00 > 0.13
5760	59	1DF	MT2	02/27/90	1.202	0.00 > 1.00	0.00 > 0.00	
5761	59	078	MT2	10/17/89	1.396	0.00 > 2.02	0.00 > 0.00	
5761	59	140	MT2	12/05/89	1.289	0.00 > 1.00	0.00 > 4.45	
5762	59	02F	MT2	10/17/89	1.200	0.00 > 1.76	0.00 > 0.61	
5763	59	02F	MT2	10/17/89	1.200	0.00 > 1.80	0.00 > 0.07	
5764	59	02G	MT2	10/17/89	0.678	0.00 > 2.77	0.00 > 5.68	
5765	59	10H	MT2	05/30/90	1.162	0.00 > 100.00	0.00 > 0.38	
5766	59	10H	MT2	05/30/90	1.162	0.00 > 49.50	0.00 > 0.00	
5767	59	24Z	CEM	08/21/90	0.830	10.30 > 49.20	4.78 > 23.49	
5767	73	25H	CEM	09/25/90	0.373	15.50 > 27.40	1.79 > 16.78	
5767	59	101	MT2	05/30/90	1.102	21.70 > 30.40	1.68 > 10.28	
5767	73	265	MT2	09/28/90	1.032	0.00 > 16.30	0.00 > 0.90	
5768	59	04H	MT2	09/12/89	1.394	0.00 > 7.92	0.00 > 0.24	
5769	59	04H	MT2	09/12/89	1.394	0.00 > 6.98	0.00 > 0.24	
5770	59	040	MT2	09/12/89	1.674	0.00 > 7.06	0.00 > 5.55	
5771	59	040	MT2	09/12/89	1.576	0.00 > 5.06	0.00 > 4.53	
5772	59	04P	MT2	09/12/89	1.654	0.00 > 8.35	0.00 > 10.12	
5773	59	04P	MT2	09/12/89	1.654	0.00 > 8.59	0.00 > 7.04	
5774	59	040	MT2	09/12/89	1.662	0.00 > 7.92	0.00 > 6.56	
5775	59	040	MT2	09/12/89	1.662	0.00 > 5.56	0.00 > 5.22	
5776	59	046	MT2	09/27/89	1.512	0.00 > 100.00	0.00 > 0.60	
5777	59	046	MT2	09/27/89	1.512	0.00 > 2.91	0.00 > 0.00	
5778	59	0X7	MT2	09/27/89	1.47	0.00 > 100.00	0.00 > 0.15	
5779	59	0X7	MT2	09/27/89	1.118	56.60 > 100.00	1.77 > 10.54	
5783	59	101	MT2	05/30/90	1.102	0.00 > 13.00	0.00 > 0.00	
5784	59	101	MT2	05/30/90	1.082	0.00 > 38.70	0.00 > 0.00	
5870	61	115	MT2	11/02/87	1.223	0.00 > 53.00	0.00 > 8.55	
5870	61	142	MT2	11/30/89	0.971	1.03 > 32.00	30.95 > 46.06	
5870	61	142	MT2	02/15/90	1.272	0.00 > 54.10	0.00 > 7.08	
5871	61	116	MT2	11/02/89	1.223	4.91 > 17.90	3.66 > 17.10	
5871	61	142	MT2	11/30/89	0.971	6.98 > 16.50	2.37 > 10.68	
5871	61	142	MT2	02/08/90	1.272	7.08 > 25.70	3.63 > 18.04	
5872	61	108	MT2	11/02/89	1.282	6.09 > 100.00	16.42 > 47.39	
5872	61	145	MT2	11/30/89	1.125	3.20 > 58.60	18.30 > 46.13	
5873	61	108	MT2	11/02/89	1.282	0.00 < 0.32	0.00 > 0.00	
5874	61	100	MT2	11/02/89	1.379	8.46 > 100.00	11.82 > 45.93	
5874	61	143	MT2	11/30/89	1.019	0.42 > 51.50	122.65 > 70.39	
5875	61	100	MT2	11/02/89	1.379	28.60 > 100.00	3.50 > 27.81	
5875	61	145	MT2	11/30/89	1.125	3.20 > 50.70	15.86 > 39.21	
5876	61	10P	MT2	11/02/89	1.291	6.21 > 50.30	3.10 > 35.31	
5876	61	143	MT2	11/30/89	1.019	0.96 > 21.20	22.18 > 46.44	
5877	61	10P	MT2	11/02/89	1.291	0.00 > 100.00	0.00 > 8.56	
5878	61	100	MT2	11/02/89	1.345	0.00 > 100.00	0.00 > 2.42	
5879	61	100	MT2	11/02/89	1.345	0.00 > 24.10	0.00 > 0.29	
5880	61	108	MT2	11/02/89	1.286	4.19 > 100.00	23.87 > 56.66	
5880	61	146	MT2	11/30/89	1.052	4.00 > 49.50	12.39 > 32.32	
5881	61	108	MT2	11/02/89	1.286	0.00 > 100.00	0.00 > 4.77	
5882	61	12A	MT2	11/13/89	1.095	15.00 > 100.00	6.55 > 38.37	
5882	61	146	MT2	11/30/89	1.052	3.20 > 73.60	23.02 > 46.03	
5883	61	12A	MT2	11/13/89	1.095	0.00 > 27.70	0.00 > 2.01	
5884	61	128	MT2	11/13/89	1.121	13.60 > 57.00	4.24 > 26.98	
5884	61	144	MT2	11/30/89	1.041	1.03 > 52.20	50.66 > 52.98	
5885	61	128	MT2	11/13/89	1.121	12.50 > 100.00	7.98 > 43.88	
5885	61	183	MT2	02/14/90	1.106	6.25 > 100.00	23.50 > 58.42	
5886	61	12C	MT2	11/13/89	1.194	0.00 > 100.00	0.00 > 1.70	
5887	61	12C	MT2	11/13/89	1.194	1.86 > 54.70	29.32 > 53.32	
5887	61	183	MT2	02/14/90	1.106	0.32 > 18.40	57.44 > 56.33	
5888	61	12D	MT2	11/13/89	1.185	0.00 > 79.20	0.00 > 0.15	

## CUMULATIVE SUMMARY (cont'd)

AVB	Ship- ment	Pit Cell #	Date	Dif- fnt.	TC 50	TC 25	\$1	TAI
5899	61	120	MT2	11/13/89	1.185	0.00 > 100.00	0.00	1.43
5890	61	128	MT2	11/13/89	1.077	0.00 > 3.70	0.00	0.00
5891	61	128	MT2	11/13/89	1.077	0.00 > 53.50	0.00	0.80
5893	61	104	MT2	05/30/90	1.083	0.00 > 3.93	0.00	0.00
5894	68	13M	MT2	08/01/90	1.296	0.00 > 100.00	0.00 > 3.70	
5895	68	1X3	MT2	08/02/90	1.272	0.00 > 100.00	0.00 > 2.20	
5913	60	0Y1	MT2	10/11/89	1.204	0.00 > 1.55	0.00 > 0.30	
5914	60	0Y1	MT2	10/11/89	1.204	0.00 > 4.92	0.00	0.31
5915	60	0YJ	MT2	10/11/89	1.195	0.00 > 0.42	0.00	0.80
5916	60	0YJ	MT2	10/11/89	1.195	0.00 > 5.90	0.00	6.76
5917	60	0YK	MT2	10/11/89	1.340	0.00 > 2.10	0.00	0.00
5919	50	0YK	MT2	10/11/89	1.340	0.00 > 0.46	0.00	0.00
5919	60	0YL	MT2	10/11/89	1.058	0.00 > 1.55	0.00 > 0.10	
5920	50	0YL	MT2	10/11/89	1.058	0.00 > 0.47	0.00 > 0.00	
5921	60	0YK	MT2	10/11/89	1.136	0.00 > 0.60	0.00	0.00
5922	60	0YU	MT2	10/11/89	1.136	0.00 > 11.40	0.00	1.46
5923	60	0YU	MT2	10/12/89	1.003	0.00 < 0.32	0.00	0.00
5924	60	0YU	MT2	10/12/89	1.033	0.00 < 0.32	0.00	0.00
5925	60	0YV	MT2	10/12/89	1.697	0.00 > 0.45	0.00 > 0.00	
5926	60	0TV	MT2	10/12/89	1.697	0.00 > 0.48	0.00 > 0.01	
5927	60	0TV	MT2	10/12/89	1.425	0.00 > 1.40	0.00 > 0.16	
5928	60	0TV	MT2	10/12/89	1.425	0.00 > 15.90	0.00	0.76
5929	60	0YX	MT2	10/12/89	1.547	0.00 > 66.00	0.00 > 3.59	
5930	60	0YY	MT2	10/12/89	1.547	0.00 < 0.32	0.00	0.00
5931	60	0YY	MT2	10/12/89	1.205	0.00 < 0.32	0.00	0.00
5932	60	0YY	MT2	10/12/89	1.205	0.00 < 0.32	0.00	0.00
5933	50	024	MT2	10/12/89	1.313	0.00 > 0.39	0.00	0.00
5934	50	024	MT2	10/12/89	1.313	0.00 > 2.00	0.00 > 1.57	
5935	50	025	MT2	10/12/89	1.210	0.00 < 0.32	0.00	0.00
5936	50	025	MT2	10/12/89	1.210	0.00 > 49.70	0.00	2.38
5937	60	12G	MT2	11/08/89	0.779	0.00 > 4.92	0.00 > 5.82	
5938	60	12G	MT2	11/08/89	0.779	0.00 > 0.33	0.00	0.00
5938	59	10F	MT2	02/27/90	1.202	0.00 > 0.34	0.00	0.00
5939	60	027	MT2	10/12/89	1.211	0.00 < 0.32	0.00	0.00
5940	60	027	MT2	10/12/89	1.211	0.00 > 15.60	0.00 > 3.95	
5941	60	028	MT2	10/12/89	1.223	0.00 > 8.68	0.00 > 6.24	
5942	60	028	MT2	10/12/89	1.223	0.00 > 1.55	0.00 > 0.50	
5943	50	0YO	MT2	10/12/89	1.066	0.00 > 49.00	0.00	2.13
5944	60	0YO	MT2	10/12/89	1.066	0.00 < 0.32	0.00	0.00
5945	60	0TP	MT2	10/12/89	1.017	0.00 < 0.32	0.00	0.00
5946	60	0YP	MT2	10/12/89	1.017	0.00 < 0.32	0.00	0.00
5947	60	0YQ	MT2	10/12/89	1.143	0.00 > 4.90	0.00 > 1.31	
5948	60	0YQ	MT2	10/12/89	1.143	0.00 < 0.32	0.00	0.00
5949	60	0YR	MT2	10/12/89	1.330	0.00 < 0.32	0.00	0.00
5950	60	0YR	MT2	10/12/89	1.330	0.00 < 0.32	0.00	0.00
5951	60	0YS	MT2	10/12/89	1.371	0.00 < 0.32	0.00	0.00
5952	60	0YS	MT2	10/12/89	1.371	0.00 < 0.32	0.00	0.00
5953	60	0ZX	MT2	10/25/89	1.490	0.00 < 0.32	0.00	0.00
5953	60	11B	MT2	11/07/89	1.278	0.00 > 0.16	0.00	2.05
5954	60	0ZX	MT2	10/25/89	1.490	0.00 > 50.80	0.00 > 2.27	
5955	60	0ZY	MT2	10/25/89	1.424	0.00 > 15.60	0.00 > 0.70	
5956	60	1KL	CEN	04/01/90	0.885	0.34 > 100.00 > 298.58	> 81.92	
5956	60	0ZT	MT2	10/25/89	1.424	55.40 > 100.00 > 1.51	> 16.55	
5956	62	101	MT2	02/27/90	1.176	94.30 > 100.00 > 1.06	> 8.23	
5957	60	022	MT2	10/25/89	1.366	0.00 > 100.00	0.00 > 0.35	
5958	60	022	MT2	10/25/89	1.366	0.00 > 1.71	0.00 > 2.03	
5958	60	11B	MT2	11/07/89	1.278	0.00 > 1.00	0.00 > 6.22	
5968	61	12T	MT2	11/14/89	1.232	0.00 > 100.00	0.00	2.32
5969	61	12T	MT2	11/14/89	1.232	0.00 < 0.32	0.00	0.00
5969	61	13L	MT2	11/30/89	1.204	0.00 < 0.32	0.00	0.00
5970	61	131	MT2	11/21/89	1.364	0.00 < 0.32	0.00	0.00
5970	61	134	MT2	11/30/89	1.204	0.00 > 0.34	0.00	0.60
5971	61	131	MT2	11/21/89	1.364	0.00 > 0.44	0.00	0.00
5971	61	14F	MT2	12/05/89	1.331	0.00 > 0.20	0.00	1.11
5972	61	132	MT2	11/21/89	1.429	0.00 > 0.51	0.00 > 0.04	
5972	61	146	MT2	12/05/89	0.648	0.00 > 0.32	0.00 > 25.76	
5972	61	101	MT2	02/27/90	1.176	0.00 < 0.32	0.00	0.00
5973	61	132	MT2	11/21/89	1.429	0.00 > 3.30	0.00 > 1.12	
5974	61	133	MT2	11/21/89	1.408	0.00 < 0.32	0.00	0.00
5974	61	134	MT2	11/30/89	1.268	0.00 > 0.30	0.00	0.00
5975	61	133	MT2	11/21/89	1.408	0.00 < 0.32	0.00	0.00
5975	61	138	MT2	11/30/89	1.268	0.00 > 0.05	0.00	1.63
5976	61	134	MT2	11/21/89	1.452	0.00 < 0.32	0.00	0.00
5976	61	138	MT2	11/30/89	1.153	0.00 > 0.01	0.00	0.00
5977	61	134	MT2	11/21/89	1.452	0.00 < 0.32	0.00	0.00
5977	61	138	MT2	11/30/89	1.153	0.00 > 0.02	0.00	0.00
5978	61	135	MT2	11/21/89	1.323	0.00 < 0.32	0.00	0.00
5978	61	138	MT2	11/30/89	1.240	0.00 < 0.30	0.00	0.00

## CUMULATIVE SUMMARY (cont'd)

AVB	Ship- No.	Plt	Cell #	Date	Diff- mtl.	TC 40	TC 25	SI	TAT
5978	61	10G	MT2	02/27/90	1.204	0.00	<	0.00	0.00
5979	61	13S	MT2	11/21/89	1.323	0.00	<	0.32	0.00
5979	61	13O	MT2	11/30/89	1.240	0.00	<	0.03	0.00
5980	61	13F	MT2	11/28/89	1.576	0.00	<	0.32	0.00
5980	61	14Y	MT2	02/13/90	1.159	0.00	<	0.03	0.00
5981	61	13F	MT2	11/28/89	1.576	0.00	<	0.46	0.00
5982	61	13G	MT2	11/23/89	1.585	0.00	<	0.32	0.00
5982	61	13S	MT2	02/14/90	1.167	0.00	<	0.00	0.00
5983	61	13G	KT2	11/28/89	1.585	0.00	<	0.47	0.00
5984	61	13I	MT2	11/28/89	1.563	0.00	<	0.32	0.00
5984	61	18J	MT2	02/14/90	1.189	0.00	<	0.00	0.00
5984	61	10J	MT2	02/27/90	1.160	0.00	<	0.32	0.00
5984	61	10C	MT2	05/22/90	1.378	0.00	<	0.04	0.00
5985	61	13H	MT2	11/28/89	1.543	0.00	<	0.32	0.00
5985	61	186	MT2	02/14/90	1.389	0.00	<	0.19	0.00
5986	61	13I	MT2	11/28/89	1.599	0.00	<	0.32	0.00
5986	61	186	MT2	02/14/90	1.089	0.00	<	0.31	0.00
5987	61	13J	MT2	11/28/89	1.599	0.00	<	0.49	0.00
5988	61	13J	MT2	11/28/89	1.570	0.00	<	0.50	0.00
5989	61	13J	MT2	11/28/89	1.570	0.00	<	0.32	0.00
5989	61	187	MT2	02/14/90	1.194	0.00	<	0.18	0.00
5990	61	158	MT2	12/20/89	1.310	0.00	<	0.32	0.00
5990	61	181	MT2	02/13/90	1.149	0.00	<	0.41	0.00
5991	61	13A	MT2	12/20/89	1.344	0.00	<	0.32	0.00
5991	61	1A2	MT2	02/13/90	1.211	0.00	<	0.22	0.00
5992	61	154	MT2	12/20/89	1.344	0.00	<	0.32	0.00
5992	61	180	MT2	02/13/90	1.267	0.00	<	0.33	0.00
5993	61	155	MT2	12/20/89	1.371	0.00	<	5.35	0.00
5994	61	155	MT2	12/20/89	1.371	0.00	>	100.00	0.00
5995	61	156	MT2	12/22/89	1.267	0.00	<	2.72	0.00
5996	61	12M	CEM	04/01/90	1.346	7.37	>	65.30	9.23
5996	61	14C	CEM	04/18/90	0.925	3.34	>	77.30	23.13
5996	61	1V0	CEM	07/24/90	0.889	3.35	>	59.20	17.68
5996	61	1VY	CEM	08/02/90	0.920	5.23	>	97.45	18.62
5996	61	156	MT2	12/20/89	1.267	1.45	>	31.20	21.42
5996	61	18M	MT2	02/14/90	1.208	1.56	>	35.20	22.59
5996	61	1PQ	MT2	06/07/90	0.940	4.22	>	33.50	7.94
5997	61	157	MT2	12/20/89	1.403	0.00	<	0.39	0.00
5998	61	157	MT2	12/20/89	1.403	0.00	<	0.32	0.00
5998	61	180	MT2	02/13/90	1.267	0.00	<	0.56	0.00
5999	61	158	MT2	12/20/89	1.310	0.00	>	100.00	0.00
5999	61	184	MT2	02/14/90	1.119	0.00	>	100.00	0.00
6001	61	14S	MT2	12/14/89	1.294	0.00	<	2.20	0.00
6002	61	145	MT2	12/14/89	1.294	0.00	<	9.06	0.00
6003	61	14T	MT2	12/14/89	1.424	0.00	<	13.90	0.00
6004	61	14T	MT2	12/14/89	1.424	0.00	<	1.99	0.00
6005	16A	1C6	CEM	02/22/90	0.860	17.10	>	100.00	5.85
6006	61	140	MT2	12/14/89	1.303	0.00	>	100.00	0.00
6007	61	140	MT2	12/14/89	1.303	0.00	>	100.00	0.00
6008	61	14Y	MT2	12/14/89	1.357	0.00	>	100.00	0.00
6009	61	14Y	MT2	12/14/89	1.357	0.00	>	100.00	0.00
6010	61	14Y	MT2	12/14/89	0.633	0.00	<	0.32	0.00
6010	61	181	MT2	02/13/90	1.169	0.00	<	0.17	0.00
6011	61	151	MT2	01/04/90	1.365	0.00	>	100.00	0.00
6012	61	151	MT2	01/04/90	1.365	0.00	<	15.50	0.00
6013	61	15J	MT2	01/04/90	1.313	0.00	>	100.00	0.00
6014	61	15J	MT2	01/04/90	1.313	0.00	<	6.43	0.00
6015	61	15K	MT2	01/04/90	1.466	0.00	>	100.00	0.00
6016	61	1P8	MT2	08/06/90	0.992	0.00	<	55.30	0.00
6017	61	15L	MT2	01/04/90	1.432	0.00	>	100.00	0.00
6018	61	15L	MT2	01/04/90	1.532	0.00	>	100.00	0.00
6019	61	15M	MT2	01/04/90	1.311	0.00	<	18.50	0.00
6020	61	15M	MT2	01/04/90	1.311	0.00	<	42.00	0.00
6021	61	164	MT2	01/23/90	0.967	0.00	>	100.00	0.00
6022	62	1C4	CEM	02/22/90	0.767	0.00	>	100.00	0.00
6022	61	168	MT2	01/23/90	0.967	0.00	>	100.00	0.00
6023	61	169	MT2	01/23/90	1.229	0.00	<	52.00	0.00
6024	61	169	MT2	01/23/90	1.229	0.00	>	100.00	0.00
6025	61	164	MT2	01/23/90	1.199	0.00	<	49.00	0.00
6026	61	164	MT2	01/23/90	1.199	0.00	>	100.00	0.00
6027	61	168	MT2	01/23/90	1.185	0.00	>	100.00	0.00
6028	61	168	MT2	01/23/90	1.185	0.00	>	100.00	0.00
6029	61	16C	MT2	01/23/90	1.204	0.00	<	83.50	0.00
6030	61	16C	MT2	01/23/90	1.204	0.00	>	100.00	0.00
6031	61	16W	MT2	01/23/90	1.305	0.00	>	100.00	0.00
6032	61	16W	MT2	01/23/90	1.305	0.00	>	100.00	0.00
6033	61	16X	MT2	01/23/90	1.238	0.00	<	48.00	0.00
6034	61	16X	MT2	01/23/90	1.238	0.00	>	100.00	0.00

## CUMULATIVE SUMMARY (cont'd)

AVS	Ship- ment	Pkt	Cat	Date	Diff- mtl.	10.50	TS.25	SI	TAB	
6035	61	16Y	MT2	01/23/90	1.162	0.00	49.00	0.00 >	4.11	
6036	61	16Y	MT2	01/23/90	1.162	0.00	10.00	0.00 >	5.48	
6037	61	16Z	MT2	01/23/90	1.109	0.00	34.40	0.00 >	3.30	
6038	61	16Z	MT2	01/23/90	1.109	0.00	18.10	0.00 >	3.90	
6039	61	17D	MT2	01/23/90	1.213	0.00	1.73	0.00 >	0.84	
6040	61	17D	MT2	01/23/90	1.213	0.00 > 100.00	0.00 >	4.73		
6041	61	15U	MT2	01/17/90	1.135	0.00 > 100.00	0.00 >	1.37		
6042	61	15U	MT2	01/17/90	1.135	0.00 > 100.00	0.00 >	5.61		
6043	61	15V	MT2	01/17/90	1.129	0.00	1.92	0.00	0.00	
6044	61	15V	MT2	01/17/90	1.129	0.00	0.50	0.00	0.00	
6045	61	15W	MT2	01/17/90	1.292	0.00	19.20	0.00	0.00	
6046	61	15W	MT2	01/17/90	1.292	0.00	82.00	0.00	0.00	
6047	61	15X	MT2	01/17/90	1.064	0.00 > 100.00	0.00 >	4.11		
6048	61	15X	MT2	01/17/90	1.064	0.00 > 100.00	0.00 >	0.82		
6049	61	15Y	MT2	01/17/90	1.111	0.00	7.06	0.00 >	2.38	
6050	61	15Y	MT2	01/17/90	1.111	0.00	9.74	0.00 >	0.05	
6051	61	15Z	MT2	01/17/90	0.831	0.00	16.60	0.00 >	5.35	
6052	61	15Z	MT2	01/17/90	0.831	0.00	12.80	0.00	0.00	
6053	61	19T	MT2	02/07/90	1.235	0.00 > 100.00	0.00 >	3.49		
6054	61	16D	MT2	01/17/90	1.302	0.00	2.22	0.00 >	1.44	
6055	62	17S	MT2	01/24/90	1.227	0.00 < 0.32	0.00	0.00		
6055	62	14X	MT2	02/13/90	1.248	0.00	7.06	0.00	0.00	
6056	62	17S	MT2	01/24/90	1.227	0.00	5.56	0.00 >	1.71	
6057	62	174	MT2	01/24/90	1.162	0.00	16.50	0.00	0.88	
6058	62	174	MT2	01/24/90	1.162	0.00	1.73	0.00 >	0.51	
6059	62	175	MT2	01/24/90	1.274	0.00	0.39	0.00 >	1.10	
6060	62	175	MT2	01/24/90	1.274	0.00	0.35	0.00	0.00	
6061	62	176	MT2	01/24/90	1.203	0.00	5.15	0.00 >	0.60	
6062	62	175	MT2	01/24/90	1.203	0.00	49.00	0.00 >	5.63	
6063	62	16E	MT2	01/24/90	1.245	0.00	11.70	0.00 >	3.38	
6064	62	16E	MT2	01/24/90	1.245	0.00 < 100.00	0.00 >	7.90		
6065	62	16F	MT2	01/24/90	1.252	0.00	0.68	0.00	0.00	
6066	62	16F	MT2	01/24/90	1.253	0.00	4.90	0.00 >	3.15	
6067	62	16G	MT2	01/24/90	1.229	0.00	40.50	0.00 >	3.24	
6068	62	16G	MT2	01/24/90	1.229	0.00	51.90	0.00 >	3.00	
6069	62	16H	MT2	01/24/90	1.213	0.00	4.57	0.00 >	1.42	
6070	62	16H	MT2	01/24/90	1.213	0.00	0.89	0.00	0.36	
6070	62	14X	MT2	02/13/90	1.248	0.00	0.96	0.00	0.00	
6071	62	16I	MT2	01/24/90	1.253	0.00	1.99	0.00 >	12.05	
6071	62	14M	MT2	02/14/90	1.208	0.00	3.20	0.00 >	2.90	
6072	62	16I	MT2	01/24/90	1.253	0.00	5.15	0.00 >	14.24	
6072	62	14M	MT2	02/14/90	1.221	0.00	3.70	0.00 >	0.28	
6073	62	17K	MT2	01/30/90	0.794	0.00	15.70	0.00	1.41	
6074	62	17K	MT2	01/30/90	0.794	0.00	16.40	0.00	0.00	
6075	66	16Y	CEM	07/19/90	0.751	0.00 > 100.00	0.00 >	34.11		
6075	62	17L	MT2	01/30/90	1.006	12.40	49.20	3.97	28.19	
6075	61	187	MT2	02/14/90	1.194	0.00 > 1.00	0.00 >	0.21		
6075	66	190	MT2	08/07/90	0.940	0.00	51.80	0.00	7.55	
6076	62	17L	MT2	01/30/90	1.006	0.00	15.50	0.00 >	5.21	
6077	62	17M	MT2	01/30/90	0.979	0.00	8.30	0.00 >	3.38	
6078	62	17N	MT2	01/30/90	0.979	0.00	0.49	0.00	0.00	
6079	62	17N	MT2	01/30/90	0.969	0.00	50.50	0.00 >	3.54	
6102	82	17N	MT2	01/30/90	0.959	0.00	52.20	0.00 >	0.20	
6103	62	17O	MT2	01/30/90	0.952	0.00	15.50	0.00 >	12.30	
6104	62	17O	MT2	01/30/90	0.892	0.00	0.49	0.00 >	0.22	
6104	62	14N	MT2	02/27/90	1.121	0.00	0.49	0.00	0.30	
6105	62	17P	MT2	01/30/90	0.941	0.00	2.42	0.00 >	0.35	
6106	62	17P	MT2	01/30/90	0.941	0.00 > 100.00	0.00 >	0.72		
6107	62	17Q	MT2	01/30/90	0.946	59.00 > 100.00	> 1.12	> 12.57		
6107	62	16O	MT2	02/20/90	1.276	0.00	54.40	0.00 >	0.90	
6108	61	104	MT2	10/31/89	1.473	0.00 > 100.00	0.00	0.44		
6108	61	10F	MT2	06/04/90	0.992	0.00 > 100.00	0.00 >	0.00		
6110	62	17B	MT2	01/30/90	0.996	0.00 > 100.00	0.00 >	13.61		
6111	144	19X	MT2	02/08/90	1.198	0.00 > 100.00	0.00 >	1.80		
6112	144	19Y	MT2	02/08/90	1.191	0.00 > 100.00	0.00 >	2.70		
6113	144	19Y	MT2	02/08/90	1.191	0.00 > 100.00	0.00 >	2.40		
6127	62	17R	MT2	01/30/90	0.705	0.00	51.30	0.00 >	2.73	
6128	62	14N	CEM	04/01/90	0.942	0.00	4.07	0.00	0.00	
6128	62	17B	MT2	01/30/90	0.705	0.00	16.00	0.00 >	1.80	
6129	62	17S	MT2	01/30/90	0.768	0.00	0.59	0.00 >	0.05	
6130	92	17S	MT2	01/30/90	0.768	0.00	48.10	0.00	9.45	
6131	62	17T	MT2	01/30/90	1.241	0.00	0.50	0.00	0.00	
6132	62	17T	MT2	01/30/90	1.041	0.00 > 100.00	0.00 >	5.10		
6133	62	187	MT2	01/30/90	0.895	0.00	15.80	0.00 >	10.51	
6134	62	187	MT2	01/30/90	0.895	0.00	45.20	0.00 >	10.11	
6135	62	14H	MT2	06/06/90	0.890	0.00	16.70	0.00 >	2.40	
6136	62	155	MT2	01/30/90	0.930	0.00	1.71	0.00 >	1.22	
6136	62	1AY	MT2	02/13/90	1.129	0.00 > 1.00	0.00 >	7.00		

## Cumulative Summary (cont'd)

AV#	Ship- No.	Pit Cell #	Test Date	Diff- mtl.	IC 50	IC 25	\$1	TAS
6137	62	189	MT2	01/30/90	0.858	0.00	15.50	0.00 > 8.56
6138	62	189	MT2	01/30/90	0.858	0.00	5.35	0.00 > 0.40
6139	62	18A	MT2	01/31/90	0.909	0.00 > 100.00	0.00	0.00 > 18.29
6140	62	18A	MT2	01/30/90	0.909	0.00	1.57	0.00 > 3.16
6140	62	142	MT2	02/13/90	1.211	0.00 > 1.00	0.00	0.00 > 0.95
6141	62	180	MT2	01/30/90	0.880	0.00	1.55	0.00 > 1.85
6142	62	186	MT2	01/30/90	0.880	0.00	11.10	0.00 > 7.79
6143	62	18C	MT2	01/30/90	0.874	0.00	1.56	0.00 > 1.17
6144	62	18C	MT2	01/30/90	0.874	0.00	4.90	0.00 > 3.08
6145	62	180	MT2	01/30/90	0.875	0.00 > 100.00	0.00	0.00 > 16.81
6145	61	184	MT2	02/14/90	1.119	0.00 > 10.00	0.00	0.00 > 9.06
6146	62	180	MT2	01/30/90	0.875	0.00 > 100.00	0.00	0.00 > 2.40
6147	62	18E	MT2	01/30/90	1.333	0.00	1.81	0.00 > 1.39
6148	62	174	CER	04/01/90	0.942	0.00 > 100.00	0.00	0.00 > 6.18
6149	62	18E	MT2	01/30/90	0.833	0.00 > 100.00	0.00	0.00 > 12.68
6149	62	18F	MT2	01/30/90	0.905	0.00	9.74	0.00 > 3.10
6150	62	12F	MT2	01/30/90	0.905	0.00	15.60	0.00 > 9.77
6151	62	18G	MT2	01/30/90	0.931	0.00	17.40	0.00 > 6.32
6152	62	18G	MT2	01/30/90	0.931	0.00	0.69	0.00 > 0.00
6153	62	181	MT2	02/21/90	1.261	0.00	0.32	0.00 > 0.00
6153	62	188	MT2	02/20/90	1.086	0.00	0.23	0.00 > 1.20
6154	62	12A	CER	02/22/90	0.737	0.00	4.20	0.00 > 3.91
6154	62	181	MT2	02/01/90	0.961	0.00	3.77	0.00 > 3.22
6155	62	182	MT2	02/01/90	1.224	0.00	1.61	0.00 > 0.00
6156	62	182	MT2	02/01/90	1.224	0.00	0.32	0.00 > 0.00
6156	62	188	MT2	02/20/90	1.366	0.00	0.17	0.00 > 1.50
6157	62	12S	CER	02/22/90	0.679	0.00	5.40	0.00 > 2.17
6157	62	183	MT2	02/01/90	1.238	0.00	0.60	0.00 > 7.25
6158	62	183	MT2	02/01/90	1.238	0.00	1.63	0.00 > 0.00
6159	62	184	MT2	02/01/90	1.230	0.00	3.52	0.00 > 0.00
6160	62	184	MT2	02/01/90	1.230	0.00	11.20	0.00 > 0.00
6161	62	185	MT2	02/01/90	1.175	0.00	3.94	0.00 > 1.72
6162	62	185	MT2	02/01/90	1.175	0.00	2.41	0.00 > 0.21
6163	62	180	MT2	02/01/90	1.373	0.00	0.32	0.00 > 0.00
6163	62	18C	MT2	02/20/90	1.106	0.00	0.07	0.00 > 0.42
6164	62	180	MT2	02/01/90	1.373	0.00	1.57	0.00 > 0.60
6165	62	18P	MT2	02/01/90	1.387	0.00	0.32	0.00 > 0.00
6165	62	18C	MT2	02/20/90	1.106	0.00	0.15	0.00 > 1.93
6166	62	18P	MT2	02/01/90	1.337	0.00	0.95	0.00 > 0.00
6167	62	180	MT2	02/01/90	1.398	0.00	0.56	0.00 > 0.00
6168	62	180	MT2	02/01/90	1.398	0.00	5.41	0.00 > 1.43
6169	62	18P	MT2	02/01/90	1.360	0.00	4.39	0.00 > 0.00
6170	13A	10G	MT2	10/26/89	1.392	0.00 > 100.00	0.00	0.00 > 1.66
6171	13A	10G	MT2	10/26/89	1.392	0.00 > 100.00	0.00	0.00 > 1.61
6172	13A	10K	MT2	10/26/89	1.276	0.00 > 100.00	0.00	0.00 > 2.07
6173	13A	10H	MT2	10/26/89	1.276	0.00 > 100.00	0.00	0.00 > 2.78
6174	66	17V	CER	08/02/90	0.920	0.00 > 100.00	0.00	0.00 > 4.60
6174	68	40U	CER	02/20/91	0.879	0.00	9.03	0.00 > 1.20
6174	62	188	MT2	02/01/90	1.340	17.40 > 100.00	5.75	> 30.66
6174	62	189	MT2	02/20/90	1.117	31.20 > 100.00	3.20	> 19.16
6174	66	17P	MT2	06/07/90	1.112	24.10 > 100.00	4.15	> 21.69
6174	68	42J	MT2	02/20/91	1.417	0.00	79.40	0.00 > 0.04
6175	56	17V	CER	06/02/90	0.469	-9.10 > 100.00	2.04	> 16.13
6175	62	188	MT2	02/01/90	1.309	45.80 > 100.00	2.18	> 16.73
6175	62	189	MT2	02/20/90	1.117	179.00 > 100.00	5.59	> 26.59
6175	66	17P	MT2	06/07/90	1.112	23.00 > 100.00	4.34	> 20.60
6176	62	182	MT2	02/01/90	1.309	20.80 > 100.00	4.82	> 26.35
6176	62	18A	MT2	02/20/90	0.954	138.00 > 100.00	7.26	> 38.37
6176	72	28G	MT2	09/05/90	1.183	47.30 > 100.00	2.12	> 16.22
6177	62	17V	MT2	01/31/90	1.230	0.00	40.60	0.00 > 0.51
6178	62	17V	MT2	01/31/90	1.230	0.00 > 100.00	0.00	0.00 > 7.34
6179	62	17S	CER	02/22/90	0.479	0.00	50.50	0.00 > 9.81
6179	52	17O	CER	04/01/90	0.950	0.00	66.70	0.00 > 0.77
6179	66	172	CER	07/19/90	0.578	0.00	71.50	0.00 > 10.59
6179	62	17W	MT2	01/31/90	1.214	24.80	49.00	1.97 > 10.49
6179	66	173	MT2	06/07/90	0.299	0.00	50.50	0.00 > 10.15
6180	74	353	CER	11/13/90	0.685	2.35 > 100.00	42.51	> 66.81
6180	74	17E	CER	01/04/91	1.397	5.11 > 100.00	19.56	> 46.18
6180	62	17W	MT2	01/31/90	1.214	32.70 > 100.00	3.05	> 19.64
6180	66	17B	MT2	06/07/90	0.999	12.10 > 100.00	8.24	> 32.34
6181	62	17X	MT2	01/31/90	1.191	0.00 > 100.00	0.00	> 2.01
6182	62	17X	MT2	01/31/90	1.191	96.60	99.30	0.98 > 7.99
6183	76	17W	CER	08/02/90	0.846	0.00 > 100.00	0.00	> 5.20
6183	62	17Y	MT2	01/31/90	1.103	51.20 > 100.00	1.95	> 13.52
6183	62	17D	MT2	02/20/90	1.276	51.60	253.00	4.90 > 26.60
6183	66	17U	MT2	06/12/90	0.958	38.10 > 100.00	2.63	> 19.54
6184	64	17X	CER	08/22/90	0.920	4.25 > 100.00	23.50	> 37.90
6184	66	206	CER	08/07/90	1.105	0.00 > 100.00	0.00	> 4.39

## Cumulative Summary (cont'd)

AVN	Ship-	Plt Cell	Test	Diff-					
No.	ment	# Line	Date	mtl.	IC 50	IC 25	SI	TAI	
6184	74	353 CEM	11/13/90	0.685	0.00	> 100.00	0.00	> 10.04	
6184	62	17Y MT2	01/31/90	1.103	48.00	> 100.00	2.08	> 14.63	
6184	62	1C1 MT2	02/20/90	1.228	52.30	> 493.00	9.43	> 38.51	
6184	54	1PV MT2	06/12/90	0.958	55.20	> 100.00	1.81	> 10.77	
6184	74	344 MT2	11/13/90	1.067	0.00	> 100.00	0.00	> 2.19	
6185	66	1YX CEM	08/02/90	0.920	44.80	> 100.00	2.14	> 22.05	
6185	62	17Z MT2	01/31/90	1.154	27.20	> 100.00	3.68	> 23.48	
6185	62	1C1 MT2	02/20/90	1.228	15.30	> 155.00	10.11	> 39.92	
6185	66	1PV MT2	06/12/90	0.877	34.10	> 100.00	2.93	> 25.34	
6186	66	1YY CEM	08/02/90	0.923	0.00	> 100.00	0.00	> 6.73	
6186	62	17Z MT2	01/31/90	1.154	48.60	> 100.00	2.06	> 18.15	
6186	62	1C2 MT2	02/20/90	1.180	53.10	> 155.00	2.92	> 19.58	
6186	66	1PV MT2	06/12/90	0.877	56.60	> 100.00	1.77	> 18.73	
6187	74	354 CEM	11/13/90	0.728	8.22	> 29.70	3.49	> 41.39	
6187	62	19Q MT2	02/07/90	1.188	55.20	> 100.00	1.81	> 10.92	
6187	66	1PV MT2	06/12/90	0.909	16.00	> 58.60	3.65	> 20.54	
6187	74	34C MT2	11/13/90	1.111	19.20	> 22.20	1.16	> 10.78	
6188	62	19Q MT2	02/07/90	1.188	46.30	> 100.00	2.16	> 13.52	
6188	66	1PV MT2	06/12/90	0.909	43.30	> 100.00	2.31	> 21.13	
6189	62	19P MT2	02/07/90	1.144	0.00	> 100.00	0.00	> 8.08	
6190	62	19P MT2	02/07/90	1.144	0.00	> 15.70	0.00	> 1.10	
6191	66	224 CEM	08/14/90	1.049	0.00	> 100.00	0.00	> 5.79	
6191	62	19G MT2	02/07/90	1.279	63.60	> 100.00	1.57	> 11.74	
6191	66	1PK MT2	06/12/90	0.968	42.20	> 100.00	2.37	> 27.94	
6192	74	354 CEM	11/13/90	0.728	8.35	> 100.00	11.70	> 42.05	
6192	62	19B MT2	02/07/90	1.279	20.10	> 100.00	4.98	> 27.65	
6192	66	1PK MT2	06/12/90	0.966	15.20	> 100.00	6.59	> 40.67	
6192	74	34C MT2	11/13/90	1.111	0.00	> 29.80	0.00	0.00	
6193	66	1VR CEM	07/24/90	0.711	16.10	> 100.00	6.21	> 26.95	
6193	62	19R MT2	02/07/90	1.176	39.50	> 100.00	2.53	> 23.87	
6193	66	1PV MT2	06/12/90	0.854	88.70	> 100.00	1.13	> 22.70	
6194	74	355 CEM	11/13/90	0.815	14.10	> 100.00	7.09	> 38.97	
6194	62	19R MT2	02/07/90	1.178	5.12	> 100.00	19.55	> 53.81	
6194	66	1PV MT2	06/12/90	0.854	4.73	> 100.00	21.16	> 51.34	
6194	74	34L MT2	11/13/90	1.109	15.90	> 100.00	7.17	> 35.97	
6195	74	355 CEM	11/13/90	0.815	97.30	> 100.00	1.03	> 9.09	
6195	62	19S MT2	02/07/90	1.311	14.30	> 30.40	2.13	> 32.76	
6195	66	19B MT2	06/26/90	1.042	5.53	> 100.00	18.07	> 52.10	
6195	74	34L MT2	11/13/90	1.105	52.30	> 100.00	1.91	> 12.47	
6196	74	4CV CEM	02/20/91	0.755	78.30	> 100.00	1.28	> 2.66	
6196	62	19B MT2	02/07/90	1.311	47.30	> 100.00	2.12	> 17.13	
6196	66	19B MT2	06/26/90	1.042	16.80	> 100.00	5.95	> 31.70	
6196	74	4CK MT2	02/20/91	1.429	52.70	> 100.00	1.90	> 12.14	
6197	74	356 CEM	11/13/90	0.828	44.70	> 100.00	2.26	> 22.04	
6197	62	18Y MT2	02/06/90	1.068	7.78	> 100.00	2.85	> 32.10	
6197	66	19C MT2	06/26/90	0.970	8.81	> 100.00	11.35	> 31.10	
6197	74	34W MT2	11/13/90	1.163	52.30	> 100.00	1.91	> 13.65	
6198	74	354 CEM	11/13/90	0.828	43.20	> 100.00	2.08	> 17.34	
6198	62	18Y MT2	02/06/90	1.068	26.40	> 100.00	1.79	> 21.94	
6198	66	19C MT2	06/26/90	0.970	14.30	> 100.00	7.01	> 38.77	
6198	62	17C MT2	07/18/90	1.164	17.86	> 325.00	18.12	> 25.70	
6198	74	34W MT2	11/13/90	1.163	49.20	> 100.00	2.03	> 11.99	
6199	66	1YY CEM	08/02/90	0.923	30.10	> 100.00	3.33	> 26.51	
6199	62	18Z MT2	02/06/90	1.095	56.90	> 100.00	1.76	> 11.46	
6199	62	18A MT2	02/20/90	0.954	277.00	> 1000.0	3.68	> 24.64	
6199	66	18B MT2	06/26/90	0.918	54.60	> 100.00	1.77	> 9.92	
6199	62	17D MT2	07/18/90	1.213	29.40	> 325.00	11.06	> 20.80	
6200	62	18C CEM	04/26/90	0.545	8.87	> 100.00	11.27	> 52.65	
6200	66	1Y2 CEM	07/19/90	0.540	2.28	> 100.00	43.87	> 43.10	
6200	62	17Z CEM	08/02/90	0.724	0.00	> 62.90	0.00	> 6.15	
6200	52	18Z MT2	02/06/90	1.095	32.70	> 100.00	3.06	> 23.84	
6200	66	18B MT2	06/26/90	0.918	21.30	> 100.00	6.70	> 29.15	
6201	62	18B CEM	04/26/90	0.545	10.30	> 100.00	9.70	> 50.52	
6201	66	1Y2 CEM	07/19/90	0.590	2.54	> 100.00	39.63	> 62.20	
6201	66	17Z CEM	08/02/90	0.726	0.00	> 59.90	0.00	> 1.60	
6201	62	19O MT2	02/06/90	1.034	23.50	> 100.00	6.25	> 27.35	
6201	66	18E MT2	06/26/90	1.001	14.40	> 100.00	6.93	> 40.72	
6202	62	1KC CEM	04/26/90	0.603	35.90	> 100.00	2.79	> 42.36	
6202	66	1V0 CEM	07/24/90	0.849	0.00	> 95.50	0.00	> 12.53	
6202	68	202 CEM	08/07/90	1.146	0.00	> 100.00	0.00	> 2.80	
6202	62	190 MT2	02/06/90	1.034	20.80	> 100.00	6.80	> 27.82	
6202	66	18E MT2	06/26/90	1.001	15.70	> 100.00	6.35	> 33.67	
6203	62	1KC CEM	04/26/90	0.603	0.00	> 3.82	0.00	> 4.33	
6203	62	191 MT2	02/06/90	1.047	55.90	> 100.00	1.79	> 13.42	
6203	66	18F MT2	06/26/90	0.935	57.50	> 88.70	1.54	> 21.7	
6204	62	191 MT2	02/06/90	1.047	0.00	> 9.61	0.00	> 0.00	
6205	62	192 MT2	02/06/90	1.068	52.00	> 100.00	1.92	> 13.84	
6205	66	18F MT2	06/26/90	0.935	23.10	> 100.00	6.33	> 36.66	

## CUMULATIVE SUMMARY (cont'd)

AVG No.	Ship- ment	Plt Cell # Line	Test Date	Diff. mtl.	IC 50	TC 25	\$1	TAI
6205	74	34M HT2	11/13/90	1.128	48.60 > 100.00	>	2.06 >	14.45
6206	62	182 HT2	02/06/90	1.088	0.00 > 100.00		0.00 >	6.05
6207	74	357 CEM	11/13/90	1.756	0.00	0.14	0.00	0.89
6207	62	191 HT2	02/06/90	1.152	17.60	49.00	2.78 >	23.26
6207	64	181 HT2	04/27/90	1.003	35.50 > 100.00	>	2.82 >	33.65
6207	74	34M HT2	11/13/90	1.128	0.00 > 100.00		0.00 >	1.83
6208	62	182 CEM	04/26/90	0.647	3.20 > 100.00	>	30.45 >	62.62
6208	68	202 CEM	08/07/90	1.146	6.44	95.00	14.70 >	62.26
6208	62	191 HT2	02/06/90	1.152	3.81 > 100.00	>	26.26 >	56.31
6208	66	181 HT2	04/27/90	1.003	1.75	92.70	52.88 >	70.14
6209	62	182 CEM	04/26/90	0.627	2.81 > 100.00	>	35.56 >	70.01
6209	66	181 CEM	07/24/90	0.833	6.60	100.00	15.16 >	45.40
6209	68	203 CEM	08/07/90	1.147	10.70	100.00	9.36 >	41.48
6209	62	191 HT2	02/06/90	1.101	6.58	100.00	21.82 >	55.91
6210	62	182 CEM	04/01/90	0.932	2.25 > 100.00	>	44.40 >	62.02
6210	66	181 CEM	07/24/90	0.839	2.22 > 100.00	>	44.97 >	58.20
6210	68	203 CEM	08/07/90	1.147	1.55 > 100.00	>	64.37 >	73.64
6210	62	191 HT2	02/06/90	1.101	12.50 > 100.00	>	8.02 >	41.18
6211	62	182 CEM	04/01/90	0.932	5.78 > 100.00	>	17.29 >	50.70
6211	66	181 CEM	07/24/90	0.833	6.39 > 100.00	>	15.65 >	34.18
6211	68	204 CEM	08/07/90	1.210	17.30	72.50	4.19 >	22.64
6211	62	191 HT2	02/06/90	1.125	4.68	60.80	13.00 >	42.03
6211	66	182 CEM	06/27/90	1.131	4.43	77.30	17.45 >	40.07
6212	62	181 HT2	02/06/90	1.125	22.80	49.00	1.90 >	12.74
6212	66	182 CEM	06/27/90	1.131	42.70 > 100.00	>	2.34 >	20.21
6213	62	191 HT2	02/07/90	1.220	0.00	6.60	0.00 >	0.26
6214	66	23C CEM	08/16/90	0.810	0.00 > 100.00		0.00 >	4.90
6214	74	34B CEM	11/27/90	1.120	50.30 > 100.00	>	1.99 >	18.73
6214	62	191 HT2	02/07/90	1.220	50.30 > 100.00	>	1.99 >	17.13
6214	66	181 HT2	06/27/90	1.148	67.30 > 100.00	>	2.12 >	32.55
6215	74	37B HT2	11/27/90	0.713	44.80 > 100.00	>	2.23 >	23.54
6215	62	182 CEM	04/01/90	0.879	1.17 > 100.00	>	85.63 >	78.04
6215	68	204 CEM	08/07/90	1.210	1.79 > 100.00	>	55.90 >	71.83
6215	66	25D CEM	08/21/90	0.744	1.69 > 100.00	>	59.21 >	73.63
6215	62	191 HT2	02/07/90	1.276	15.40 > 100.00	>	6.48 >	31.26
6215	66	181 HT2	06/27/90	1.148	19.10 > 100.00	>	5.22 >	33.09
6216	74	38B CEM	11/27/90	1.120	16.30 > 100.00	>	6.15 >	31.51
6216	62	195 HT2	02/07/90	1.276	23.90	52.70	2.20 >	14.08
6215	66	181 HT2	06/27/90	1.102	12.90 > 100.00	>	7.75 >	43.61
6216	74	37B HT2	11/27/90	0.713	0.00	20.20	0.00	8.96
6217	66	223 CEM	08/16/90	0.951	8.67 > 100.00	>	11.53 >	45.68
6217	62	194 HT2	02/07/90	1.247	4.73 > 100.00	>	21.16 >	56.11
6217	66	181 HT2	06/27/90	1.102	5.23 > 100.00	>	19.11 >	53.90
6218	66	23C CEM	08/16/90	0.810	34.00 > 100.00	>	2.94 >	18.93
6218	62	194 HT2	02/07/90	1.247	6.87	7.43	1.53 >	14.47
6218	66	181 HT2	06/28/90	1.176	4.76 > 100.00	>	21.02 >	52.50
6218	62	17D HT2	07/18/90	1.213	2.32	196.00	84.53 >	37.42
6219	68	205 CEM	08/07/90	1.135	0.00 > 100.00		0.00 >	5.59
6219	74	38C CEM	11/27/90	1.265	0.00 > 100.00		0.00 >	2.43
6219	62	197 HT2	02/07/90	1.207	34.80 > 100.00	>	2.87 >	22.26
6219	62	1C2 HT2	02/20/90	1.180	39.90	180.00	4.50 >	25.82
6219	66	180 HT2	06/28/90	1.176	20.10 > 100.00	>	4.98 >	30.36
6219	62	11E HT2	07/18/90	1.147	22.90	342.00	15.02 >	24.18
6219	74	37S HT2	11/27/90	0.911	32.00 > 100.00	>	3.13 >	32.18
6220	66	226 CEM	08/16/90	1.049	15.60 > 100.00	>	6.41 >	32.39
6220	62	197 HT2	02/07/90	1.207	6.95 > 100.00	>	20.21 >	55.21
6220	66	180 HT2	06/28/90	1.046	4.82 > 100.00	>	20.76 >	60.71
6221	66	18V CEM	06/26/90	1.150	20.70 > 100.00	>	3.48 >	21.14
6221	62	198 HT2	02/07/90	1.222	34.90 > 100.00	>	2.87 >	23.46
6222	66	18V CEM	06/26/90	1.150	59.30 > 100.00	>	1.69 >	12.14
6222	62	198 HT2	02/07/90	1.222	36.20 > 100.00	>	2.76 >	22.98
6223	66	180 CEM	06/26/90	1.318	14.40 > 100.00	>	6.93 >	38.76
6223	62	199 HT2	02/07/90	1.278	5.45 > 100.00	>	18.33 >	52.10
6224	66	18W CEM	06/26/90	1.318	13.10 > 100.00	>	7.65 >	43.17
6224	62	199 HT2	02/07/90	1.278	12.30 > 100.00	>	8.11 >	42.88
6225	66	19X CEM	06/26/90	1.158	16.20 > 100.00	>	6.17 >	36.86
6225	66	22M CEM	08/15/90	1.072	0.00 > 100.00		0.00 >	5.79
6225	62	19T HT2	02/07/90	1.235	16.80 > 100.00	>	5.96 >	33.96
6226	66	22M CEM	08/15/90	1.072	0.00 > 100.00		0.00 >	2.48
6226	62	144 HT2	02/13/90	1.053	34.80 > 100.00	>	2.87 >	21.06
6227	66	19T CEM	08/26/90	1.221	16.30 > 100.00	>	5.23 >	33.09
6227	66	220 CEM	08/15/90	0.980	70.30 > 100.00	>	1.62 >	8.81
6227	62	144 HT2	02/13/90	1.053	13.80 > 100.00	>	7.26 >	35.67
6228	66	19T CEM	08/26/90	1.221	0.00 > 69.00		0.00 >	15.45
6228	66	220 CEM	08/15/90	0.980	0.00 > 100.00		0.00 >	1.19
6228	62	1A3 HT2	02/13/90	0.823	14.90	62.00	4.23 >	26.00
6229	66	192 CEM	08/26/90	1.357	0.00 > 100.00		0.00 >	17.68
6229	66	22P CEM	08/15/90	1.025	0.00 > 100.00		0.00 >	7.03

## Cumulative Summary (cont'd)

AVS No.	Ship- ment	Pkt #	Cell Line	Test Date	Difff- rential	TC 50	TC 25	SI	TAT
6229	62	1AS	HT2	02/13/90	0.823	62.20	> 100.00	> 1.61	> 19.06
6230	62	1CR	CEM	04/01/90	1.046	0.00	> 100.00	0.00	> 6.29
6230	66	1B2	CEM	06/26/90	1.357	45.30	> 100.00	> 2.21	> 29.44
6230	62	1A6	HT2	02/13/90	1.027	29.30	> 100.00	> 3.41	> 22.74
6230	61	1B4	HT2	02/27/90	1.160	48.60	175.00	3.61	> 19.98
6231	62	1A6	HT2	02/13/90	1.027	0.00	12.50	0.00	0.00
6232	62	1A7	HT2	02/13/90	0.968	0.00	28.50	0.00	> 0.70
6234	67	222	CEM	08/14/90	1.102	0.00	> 100.00	0.00	0.00
6234	67	1UK	HT2	07/25/90	1.115	0.00	> 100.00	0.00	> 5.51
6235	67	1WD	HT2	07/26/90	1.116	0.00	> 100.00	0.00	> 1.79
6236	67	1WD	HT2	07/26/90	1.116	0.00	> 100.00	0.00	0.00
6237	62	1A7	HT2	02/13/90	0.968	0.00	> 100.00	0.00	> 1.15
6238	62	1AB	HT2	02/13/90	1.066	0.00	> 100.00	0.00	> 0.81
6239	62	1AB	HT2	02/13/90	1.066	0.00	> 100.00	0.00	> 1.04
6278	17A	1FC	CEM	03/13/90	0.617	0.00	> 100.00	0.00	> 29.59
6278	17A	1FB	CEM	03/13/90	0.616	0.00	> 100.00	0.00	0.00
6278	17A	1G6	CEM	03/21/90	1.603	0.00	35.50	0.00	0.00
6278	17A	1FF	HT2	03/13/90	1.478	0.00	> 100.00	0.00	> 1.97
6278	17A	1FE	HT2	03/13/90	1.485	0.00	> 100.00	0.00	0.00
6278	17A	1GB	HT2	03/21/90	1.369	0.00	48.70	0.00	> 2.45
6279	17A	1FC	CEM	03/13/90	0.617	0.00	> 100.00	0.00	> 29.40
6279	17A	1FB	CEM	03/13/90	0.616	0.00	> 100.00	0.00	0.00
6279	17A	1G6	CEM	03/21/90	1.603	0.00	41.70	0.00	> 0.90
6279	17A	1FF	HT2	03/13/90	1.478	0.00	97.40	0.00	> 3.00
6279	17A	1FE	HT2	03/13/90	1.485	0.00	> 100.00	0.00	0.00
6279	17A	1GB	HT2	03/21/90	1.369	0.00	45.60	0.00	> 3.68
6283	14A	105	CEM	10/17/90	1.86	> 100.00	0.00	0.00	> 1.38
6283	14A	1EU	HT2	01/30/90	1.207	0.00	0.51	0.00	> 0.34
6283	14A	1IG	HT2	10/31/90	1.00	> 100.00	0.00	0.00	> 0.42
6284	14A	19Z	HT2	02/05/90	1.197	0.00	> 100.00	0.00	> 3.01
6285	14A	1A1	CEM	02/15/90	0.866	0.00	1.00	0.00	> 7.99
6285	62	1CA	CEM	02/22/90	0.866	0.00	26.70	0.00	> 1.04
6285	14A	1EU	HT2	01/30/90	1.207	0.00	9.87	0.00	> 4.03
6286	14A	106	CEM	10/17/90	2.01	> 100.00	0.00	0.00	> 0.46
6286	14A	19Z	HT2	02/08/90	1.197	0.00	> 100.00	0.00	> 0.60
6286	14A	11W	HT2	10/31/90	1.05	> 100.00	0.00	0.00	> 0.82
6287	14A	106	CEM	10/17/90	2.01	> 100.00	0.00	0.00	> 6.32
6287	14A	1A0	HT2	02/08/90	1.273	0.00	> 100.00	0.00	0.00
6287	14A	11W	HT2	10/31/90	2.01	> 100.00	0.00	0.00	> 0.81
6288	16A	1PJ	HT2	06/06/90	0.868	0.00	0.72	0.00	> 0.35
6288	16A	1SA	HT2	07/17/90	1.147	0.00	3.25	0.00	> 10.76
6289	14A	1AP	CEM	12/07/89	0.907	8.33	> 100.00	> 12.01	> 37.91
6289	14A	1C7	CEM	02/22/90	0.861	4.95	> 100.00	> 20.79	> 50.06
6289	14A	14W	HT2	12/07/89	1.157	5.97	> 100.00	> 16.76	> 48.09
6289	14A	1SP	HT2	12/20/89	1.352	17.70	> 100.00	> 5.65	> 32.16
6293	14A	1A9	CEM	12/07/89	0.907	< 0.32	2.07	6.46	> 18.99
6293	14A	1C7	CEM	02/22/90	0.861	< 0.32	> 100.00	> 312.50	> 78.84
6293	14A	14W	HT2	12/07/89	1.157	< 0.32	> 100.00	> 312.50	> 90.06
6293	14A	1SF	HT2	12/20/89	1.372	< 0.33	89.50	> 273.63	> 86.88
6294	14A	14W	HT2	12/07/89	1.159	0.00	> 100.00	0.00	> 6.39
6294	14A	1SG	HT2	12/20/89	1.344	0.00	> 100.00	0.00	> 2.30
6295	14A	1A0	CEM	12/07/89	0.938	0.40	3.48	8.62	> 24.51
6295	14A	14W	HT2	12/07/89	1.159	12.10	> 100.00	> 8.24	> 46.19
6295	14A	1SG	HT2	12/20/89	1.364	11.50	> 100.00	> 8.37	> 37.75
6301	63	1CH	HT2	02/27/90	1.073	0.00	71.50	0.00	> 2.96
6302	63	1CH	HT2	02/27/90	1.073	0.00	49.30	0.00	> 3.21
6303	63	1CH	HT2	02/27/90	1.117	0.00	3.24	0.00	0.09
6304	63	1CH	HT2	02/27/90	1.117	0.00	72.50	0.00	> 3.21
6305	63	1CP	HT2	02/27/90	1.116	0.00	16.40	0.00	> 1.80
6306	63	1CP	HT2	02/27/90	1.116	0.00	< 0.32	0.00	0.00
6306	63	1CH	HT2	05/22/90	1.121	0.00	0.58	0.00	> 3.70
6307	63	1K5	CEM	04/01/90	0.923	0.00	0.00	0.00	> 1.20
6307	63	1CH	HT2	02/27/90	1.208	0.00	6.97	0.00	> 5.07
6308	63	1CH	HT2	02/27/90	1.208	0.00	3.86	0.00	> 1.07
6309	63	1K0	CEM	04/01/90	0.950	0.00	54.40	0.00	> 2.41
6309	63	1CH	HT2	02/27/90	1.046	0.00	32.00	0.00	> 12.06
6310	63	1CR	HT2	02/27/90	1.046	0.00	1.55	0.00	0.00
6311	63	1CT	HT2	02/28/90	1.177	0.20	56.60	0.00	> 6.79
6312	63	1CT	HT2	02/28/90	1.177	0.00	16.00	0.00	0.00
6313	63	1GU	HT2	02/28/90	1.173	0.00	17.30	0.00	> 1.20
6314	63	1GU	HT2	02/28/90	1.173	0.00	53.30	0.00	0.00
6315	63	1CV	HT2	02/28/90	1.011	0.00	4.92	0.00	> 0.45
6316	63	1CV	HT2	02/28/90	1.011	0.00	4.90	0.00	0.00
6317	63	1CH	HT2	02/28/90	1.137	0.00	3.64	0.00	> 1.33
6318	63	1CH	HT2	02/28/90	1.137	0.00	3.11	0.00	0.00
6319	63	1CI	HT2	02/28/90	1.104	0.00	6.82	0.00	> 1.27
6320	63	1CI	HT2	02/28/90	1.104	0.00	< 0.32	0.00	0.00
6320	63	1CH	HT2	05/22/90	1.121	0.00	0.33	0.00	> 6.23

## CUMULATIVE SUMMARY (cont'd)

AV#	Ship- No.	Pit Cell #	Date	Diff- mtl.	10 50	10 25	\$1	TAI
6321	63	1FK HT2	03/15/90	1.203	0.00	4.92	0.00	0.25
6322	63	1GR CEM	04/01/90	0.879	0.00	< 0.00	0.00	0.00
6322	63	1FH HT2	03/15/90	1.203	0.00	1.55	0.00	> 2.48
6323	63	1FI HT2	03/15/90	1.157	0.00	> 15.50	0.00	> 0.30
6324	63	1FI HT2	03/15/90	1.157	0.00	> 100.00	0.00	> 2.60
6325	63	1FJ HT2	03/15/90	1.222	0.00	17.70	0.00	> 0.80
6326	63	1FJ HT2	03/15/90	1.222	0.00	49.20	0.00	> 0.05
6327	63	1FK HT2	03/15/90	1.192	0.00	51.50	0.00	1.00
6328	63	1FK HT2	03/15/90	1.192	0.00	2.41	0.00	> 0.23
6329	63	1FL HT2	03/15/90	1.196	0.00	> 100.00	0.00	0.00
6330	63	1FL HT2	03/15/90	1.196	0.00	69.20	0.00	1.51
6331	63	1DT HT2	03/01/90	1.089	0.00	> 100.00	0.00	> 13.67
6332	63	1DT HT2	03/01/90	1.089	0.00	15.50	0.00	> 2.30
6333	63	1DU HT2	03/01/90	1.152	0.00	4.95	0.00	> 2.10
6334	63	1DU HT2	03/01/90	1.152	0.00	4.90	0.00	0.20
6335	63	1DV HT2	03/01/90	1.119	0.00	5.70	0.00	> 0.80
6336	63	1DV HT2	03/01/90	1.119	0.00	65.30	0.00	> 7.95
6337	63	1DW HT2	03/01/90	1.217	0.00	15.70	0.00	> 1.10
6338	63	1DW HT2	03/01/90	1.217	0.00	4.19	0.00	> 0.87
6339	63	1DX HT2	03/01/90	1.187	0.00	> 100.00	0.00	> 1.91
6340	63	1DX HT2	03/01/90	1.187	0.00	1.60	0.00	> 1.22
6341	63	1CY CEM	02/20/91	0.755	0.00	12.40	0.00	0.00
6341	63	1CX HT2	02/20/91	1.429	0.00	14.50	0.00	0.00
6342	63	1DZ HT2	03/06/90	1.253	0.00	4.90	0.00	0.00
6343	63	1DZ HT2	03/06/90	1.253	0.00	49.00	0.00	2.71
6344	63	1E0 HT2	03/06/90	1.256	0.00	0.54	0.00	> 0.01
6345	63	1E0 HT2	03/06/90	1.256	0.00	> 100.00	0.00	> 0.40
6346	63	1E1 HT2	03/06/90	1.246	0.00	> 100.00	0.00	0.00
6347	63	1E1 HT2	03/06/90	1.246	0.00	4.66	0.00	0.00
6348	63	1E2 HT2	03/06/90	1.201	0.00	< 0.32	0.00	0.00
6349	63	1E2 HT2	03/06/90	1.201	0.00	12.20	0.00	0.00
6350	63	1E3 HT2	03/06/90	1.205	0.00	0.51	0.00	0.00
6351	63	1E3 HT2	03/06/90	1.205	0.00	< 0.32	0.00	0.00
6352	63	1ER HT2	03/06/90	1.219	0.00	1.86	0.00	0.00
6353	63	1ER HT2	03/06/90	1.219	0.00	1.44	0.00	0.00
6354	63	1ES HT2	03/06/90	1.175	0.00	1.44	0.00	0.00
6355	63	1ES HT2	03/06/90	1.175	0.00	1.84	0.00	0.00
6356	63	1ET HT2	03/06/90	1.161	0.00	1.30	0.00	0.00
6357	63	1ET HT2	03/06/90	1.161	0.00	0.97	0.00	0.00
6358	63	1EU HT2	03/06/90	1.213	0.00	< 0.32	0.00	0.00
6359	63	1EU HT2	03/06/90	1.213	0.00	1.29	0.00	0.00
6360	63	1EV HT2	03/06/90	1.267	0.00	2.49	0.00	0.00
6361	63	1EV HT2	03/06/90	1.247	0.00	39.20	0.00	0.28
6362	63	1ES HT2	03/07/90	1.145	0.00	> 100.00	0.00	> 0.76
6363	63	1ES HT2	03/07/90	1.145	0.00	55.40	0.00	> 0.40
6364	63	1EE HT2	03/07/90	1.123	0.00	> 100.00	0.00	> 1.50
6365	63	1EE HT2	03/07/90	1.128	0.00	15.90	0.00	> 0.03
6366	63	1ET HT2	03/07/90	1.075	0.00	50.30	0.00	> 0.20
6367	63	1ET HT2	03/07/90	1.075	0.00	9.35	0.00	> 0.30
6368	63	1EB HT2	03/07/90	1.135	0.00	44.60	0.00	> 0.06
6369	63	1EB HT2	03/07/90	1.139	0.00	6.18	0.00	1.15
6370	63	1EF HT2	03/07/90	1.181	0.00	3.64	0.00	> 0.03
6371	63	1EF HT2	03/07/90	1.181	0.00	2.10	0.00	0.00
6372	63	1EE HT2	03/08/90	1.350	0.00	> 100.00	0.00	> 2.99
6373	63	1EE HT2	03/08/90	1.350	0.00	> 100.00	0.00	> 3.10
6374	63	1EC HT2	03/08/90	1.373	0.00	> 100.00	0.00	> 2.95
6375	63	1EC HT2	03/08/90	1.373	0.00	> 100.00	0.00	> 4.73
6376	63	1ED HT2	03/08/90	1.310	0.00	45.00	0.00	0.53
6377	63	1ED HT2	03/08/90	1.310	0.00	18.00	0.00	> 1.00
6376	63	1OP CEM	04/01/90	1.046	0.00	57.00	0.00	0.00
6378	63	1EE HT2	03/08/90	1.282	0.00	88.70	0.00	0.15
6379	63	1OP CEM	04/01/90	1.046	0.00	> 100.00	0.00	> 5.11
6379	63	1EE HT2	03/08/90	1.282	0.00	> 100.00	0.00	> 11.29
6380	63	1EF HT2	03/08/90	1.146	0.00	> 100.00	0.00	> 5.89
6381	63	1EF HT2	03/08/90	1.146	0.00	49.20	0.00	> 4.56
6382	63	1EO HT2	03/20/90	1.174	0.00	7.92	0.00	0.00
6383	63	1EO HT2	03/20/90	1.174	0.00	> 100.00	0.00	0.00
6384	63	1EL HT2	03/20/90	1.081	0.00	> 100.00	0.00	0.20
6385	63	1EL HT2	03/20/90	1.081	0.00	16.90	0.00	0.00
6386	63	1EZ HT2	03/20/90	1.108	0.00	6.47	0.00	0.00
6387	63	1EZ HT2	03/20/90	1.108	0.00	16.30	0.00	> 0.90
6388	63	1EX CEM	07/05/90	1.113	0.00	< 0.32	0.00	0.00
6389	63	1EZ HT2	03/20/90	1.070	0.00	0.51	0.00	0.00
6389	63	1AL HT2	04/24/90	0.991	0.00	0.42	0.00	> 1.17
6390	63	1EX CEM	07/05/90	1.113	0.00	0.55	0.00	0.00
6391	63	1AL HT2	04/24/90	1.070	0.00	0.51	0.00	0.00
6392	63	1AL HT2	03/20/90	1.216	0.00	9.50	0.00	> 0.50

## Cumulative Summary (cont'd)

AVS No.	Ship- ment	Pkt Call # Line	Test Date	Diff- mtl.	IC 50	TC 25	SI	TAT
6391	63	1G4 MT2	03/28/90	1.216	0.00	50.50	0.00	1.11
6392	63	1GT MT2	03/28/90	1.291	0.00	5.05	0.00	0.40
6393	63	1GT MT2	03/28/90	1.291	0.00	0.32	0.00	0.00
6395	63	1JW MT2	04/24/90	0.919	0.00	0.02	0.00	0.65
6396	63	1GU MT2	03/28/90	1.331	0.00	5.27	0.00	0.00
6395	63	1GU MT2	03/28/90	1.331	0.00	0.32	0.00	0.00
6395	63	1JW MT2	04/24/90	0.919	0.00	0.35	0.00	0.20
6396	63	1GV MT2	03/28/90	1.279	0.00	> 100.00	0.00	0.41
6397	63	1GV MT2	03/28/90	1.279	0.00	< 0.32	0.00	0.00
6397	63	1JW MT2	04/24/90	1.030	0.00	0.33	0.00	0.00
6398	63	1GU MT2	03/28/90	1.249	0.00	1.19	0.00	0.00
6399	63	1GU MT2	03/28/90	1.249	0.00	< 0.32	0.00	0.00
6399	63	1JW MT2	04/24/90	1.030	0.00	0.30	0.00	0.00
6400	66	198 MT2	06/28/90	1.094	0.00	< 0.32	0.00	0.00
6400	66	1SP MT2	07/17/90	1.154	0.00	0.00	0.00	> 1.40
6401	66	19R MT2	06/28/90	1.171	0.00	< 0.32	0.00	0.00
6401	66	198 MT2	07/17/90	1.186	0.00	0.02	0.00	> 0.01
6402	66	19R MT2	06/28/90	1.171	0.00	1.48	0.00	> 0.13
6403	66	198 MT2	06/28/90	1.124	0.00	< 0.32	0.00	0.00
6403	66	198 MT2	07/17/90	1.186	0.00	0.03	0.00	0.00
6404	66	198 MT2	06/28/90	1.124	0.00	0.49	0.00	0.00
6404	66	19R MT2	07/17/90	1.148	0.00	< 0.32	0.00	> 0.90
6405	66	10T MT2	06/28/90	1.072	0.00	< 0.32	0.00	0.00
6405	66	19R MT2	07/17/90	1.148	0.00	0.00	0.00	> 0.05
6406	66	10T MT2	06/28/90	1.072	0.00	0.84	0.00	> 0.32
6406	66	198 MT2	07/17/90	1.212	0.00	0.29	0.00	> 1.27
6407	66	1R1 MT2	07/03/90	1.179	0.00	0.52	0.00	0.00
6408	66	1R1 MT2	07/03/90	1.179	0.00	< 0.32	0.00	0.00
6409	66	1R2 MT2	07/03/90	1.179	0.00	15.60	0.00	> 6.52
6410	66	1R2 MT2	07/03/90	1.179	0.00	0.54	0.00	0.00
6412	66	1R3 MT2	07/03/90	1.222	0.00	26.20	0.00	> 0.33
6413	66	1R3 MT2	07/03/90	1.222	0.00	49.30	0.00	> 6.71
6414	66	1R4 MT2	07/03/90	1.204	0.00	0.48	0.00	0.00
6415	66	1R4 MT2	07/03/90	1.204	0.00	4.95	0.00	1.85
6416	66	1R5 MT2	07/03/90	1.170	0.00	> 100.00	0.00	0.02
6417	66	1R5 MT2	07/03/90	1.170	0.00	> 100.00	0.00	> 3.50
6418	66	1R6 MT2	07/03/90	1.233	0.00	1.60	0.00	0.00
6419	66	1R6 MT2	07/03/90	1.233	0.00	5.15	0.00	1.34
6420	66	1R7 MT2	07/03/90	1.205	0.00	> 100.00	0.00	0.00
6421	66	1R7 MT2	07/03/90	1.205	0.00	2.80	0.00	0.00
6422	66	1R8 MT2	07/03/90	1.212	0.00	> 100.00	0.00	> 5.80
6423	66	1R8 MT2	07/03/90	1.212	0.00	> 100.00	0.00	1.38
6424	66	1R9 MT2	07/03/90	1.174	0.00	49.00	0.00	> 1.71
6425	66	1R9 MT2	07/03/90	1.174	0.00	5.70	0.00	> 0.10
6426	66	1RA MT2	07/03/90	1.215	0.00	14.50	0.00	> 0.07
6427	66	1RA MT2	07/03/90	1.215	0.00	66.00	0.00	> 0.02
6428	66	1RF MT2	07/03/90	1.104	0.00	56.70	0.00	0.00
6429	66	1UX CEM	07/19/90	0.456	0.00	> 100.00	0.00	0.00
6429	66	1RF MT2	07/03/90	1.104	0.00	> 100.00	0.00	> 3.70
6430	66	1RG MT2	07/03/90	1.030	0.00	5.27	0.00	> 1.93
6431	66	1RG MT2	07/03/90	1.030	0.00	38.60	0.00	> 1.98
6432	66	1RH MT2	07/03/90	0.590	0.00	< 0.32	0.00	0.00
6433	66	1RH MT2	07/03/90	0.590	0.00	4.16	0.00	0.00
6434	66	1R1 MT2	07/03/90	0.935	0.00	7.15	0.00	> 2.52
6435	66	1R1 MT2	07/03/90	0.935	0.00	49.00	0.00	> 2.81
6436	66	1RJ MT2	07/03/90	1.073	0.00	4.90	0.00	> 4.04
6437	66	1RJ MT2	07/03/90	1.073	0.00	1.55	0.00	> 0.20
6438	66	Z30 CEM	08/16/90	0.697	0.00	> 100.00	0.00	1.44
6438	66	1RK MT2	07/03/90	1.078	0.00	> 100.00	0.00	> 6.81
6439	66	1RK MT2	07/03/90	1.078	0.00	14.60	0.00	> 2.44
6440	63	1GX MT2	03/28/90	1.265	0.00	< 0.32	0.00	0.00
6440	63	1J0 MT2	04/24/90	0.974	0.00	0.05	0.00	0.47
6441	63	1GX MT2	03/28/90	1.265	0.00	> 100.00	0.00	0.43
6442	63	1GE MT2	03/20/90	1.299	0.00	> 100.00	0.00	0.52
6443	63	1TW CEM	07/17/90	1.357	0.00	> 100.00	0.00	> 10.58
6443	63	1GE MT2	03/20/90	1.289	0.00	> 100.00	0.00	> 2.62
6444	63	1GF MT2	03/20/90	1.283	0.00	> 100.00	0.00	> 1.45
6445	63	1GF MT2	03/20/90	1.283	0.00	15.50	0.00	1.00
6446	63	1TO CEM	07/17/90	1.363	0.00	55.70	0.00	> 4.92
6446	63	1GG MT2	03/20/90	1.266	0.00	> 100.00	0.00	> 1.63
6447	63	1GG MT2	03/20/90	1.266	0.00	> 100.00	0.00	1.68
6448	63	1GM MT2	03/20/90	1.259	0.00	49.70	0.00	0.44
6449	63	195 CEM	06/12/90	1.178	0.00	> 100.00	0.00	> 27.12
6449	63	1GM MT2	03/20/90	1.259	0.00	> 100.00	0.00	> 0.23
6450	63	195 CEM	06/12/90	1.178	0.00	64.80	0.00	> 22.19
6450	63	161 MT2	03/20/90	1.229	0.00	> 100.00	0.00	> 0.60
6451	63	161 MT2	03/20/90	1.229	0.00	> 100.00	0.00	> 1.40
6452	63	196 CEM	06/12/90	1.571	0.00	> 100.00	0.00	> 22.81

## CUMULATIVE SUMMARY (cont'd)

AVS	Ship-	Pit Cell	Test	Diff-	IC 50	IC 25	SI	TAI
No.	ment	# Line	Date	rent.				
6452	63	1MM NT2	03/28/90	1.333	0.00	> 100.00	0.00	> 3.00
6453	63	1MM NT2	03/28/90	1.333	0.00	< 3.87	0.00	> 0.77
6454	63	106 CEM	06/12/90	1.571	0.00	> 100.00	0.00	> 19.43
6454	63	1HD NT2	03/28/90	1.357	0.00	> 100.00	0.00	> 1.70
6455	63	107 CEM	06/12/90	1.186	17.50	> 100.00	5.71	> 38.98
6455	63	1HD NT2	03/28/90	1.357	0.00	> 100.00	0.00	> 4.00
6455	72	28G NT2	09/06/90	1.183	0.00	> 100.00	0.00	> 3.80
6456	63	107 CEM	06/12/90	1.186	0.00	< 14.20	0.00	> 10.33
6456	63	1SP NT2	03/28/90	1.304	0.00	< 49.00	0.00	> 4.31
6457	63	108 CEM	06/12/90	1.220	77.00	> 100.00	1.29	> 27.78
6457	63	1HP NT2	03/28/90	1.304	0.00	> 100.00	0.00	> 3.39
6458	63	108 CEM	06/12/90	1.220	0.00	> 100.00	0.00	> 22.99
6458	63	1MG NT2	03/28/90	1.135	0.00	> 100.00	0.00	> 5.90
6459	63	109 CEM	06/12/90	1.466	0.00	< 24.50	0.00	> 12.43
6459	63	1HS NT2	03/28/90	1.135	0.00	> 100.00	0.00	> 3.21
6460	63	109 CEM	06/12/90	1.466	22.40	< 62.40	2.79	> 30.26
6460	63	1HR NT2	03/28/90	1.300	0.00	< 55.30	0.00	> 1.70
6460	72	28A NT2	09/06/90	1.160	0.00	< 74.50	0.00	> 0.90
6461	63	1HR NT2	03/28/90	1.300	0.00	< 69.00	0.00	> 0.90
6462	63	1HJ NT2	04/04/90	1.325	0.00	< 0.32	0.00	> 0.00
6462	63	140 NT2	04/26/90	0.976	0.00	< 0.06	0.00	> 0.10
6463	63	1W1 NT2	04/04/90	1.325	0.00	< 88.70	0.00	> 6.25
6464	63	1J1 CEM	04/25/90	0.657	0.00	> 100.00	0.00	> 24.30
6464	63	1WJ NT2	04/04/90	1.272	0.00	> 100.00	0.00	> 0.00
6465	63	1J1 CEM	04/25/90	0.657	0.00	< 38.60	0.00	> 15.27
6465	63	1HJ NT2	04/04/90	1.272	0.00	< 23.60	0.00	> 0.00
6466	63	1KA CEM	04/26/90	0.500	0.32	< 51.50	> 161.06	> 85.67
6466	63	1MK NT2	04/04/90	1.279	6.99	< 48.80	9.78	> 35.57
6467	63	1MK NT2	04/04/90	1.279	0.00	< 0.32	0.00	> 0.00
6467	63	1JP NT2	04/24/90	1.037	0.00	< 0.04	0.00	> 0.42
6468	63	1AU CEM	04/25/90	0.579	0.00	> 100.00	0.00	> 29.62
6468	63	1HL NT2	04/04/90	1.252	0.00	> 100.00	0.00	> 0.00
6469	63	1AU CEM	04/25/90	0.579	0.00	< 22.50	0.00	> 16.16
6469	63	1HL NT2	04/04/90	1.252	0.00	< 80.60	0.00	> 0.42
6470	66	1RL NT2	07/03/90	0.975	0.00	< 16.30	0.00	> 2.20
6471	66	1RL NT2	07/03/90	0.975	0.00	< 1.56	0.00	> 0.00
6472	66	1RM NT2	07/03/90	0.968	0.00	> 100.00	0.00	> 2.40
6473	66	1RM NT2	07/03/90	0.968	0.00	< 16.80	0.00	> 3.08
6473	66	1RM NT2	07/03/90	1.027	0.00	< 6.92	0.00	> 1.60
6473	66	1UX CEM	07/19/90	0.454	0.00	> 100.00	0.00	> 0.95
6473	66	1RM NT2	07/03/90	1.027	0.00	> 100.00	0.00	> 7.38
6476	66	1RO NT2	07/03/90	1.095	0.00	< 7.45	0.00	> 0.20
6477	66	1UY CEM	07/19/90	0.751	0.00	< 6.00	0.00	> 9.31
6477	74	38C CEM	11/27/90	1.265	0.00	< 8.87	0.00	> 4.94
6477	66	1BC NT2	07/03/90	1.095	8.27	< 7.67	0.93	> 5.52
6477	74	378 NT2	11/27/90	0.911	0.00	< 6.53	0.00	> 3.57
6478	66	184 NT2	07/11/90	1.096	0.00	< 16.30	0.00	> 0.00
6479	66	184 NT2	07/11/90	1.096	0.00	< 4.92	0.00	> 0.00
6480	66	185 NT2	07/11/90	1.051	0.00	< 72.50	0.00	> 0.00
6481	66	185 NT2	07/11/90	1.051	0.00	< 5.01	0.00	> 0.10
6482	66	238 CEM	04/16/90	0.717	0.00	< 49.00	0.00	> 1.60
6482	73	261 CEM	09/28/90	0.944	0.00	< 0.34	0.00	> 0.00
6482	66	186 NT2	07/11/90	1.154	17.80	< 49.00	2.76	> 16.59
6483	73	266 NT2	09/28/90	1.084	0.00	< 1.14	0.00	> 0.00
6483	66	23A CEM	08/16/90	0.732	0.00	> 100.00	0.00	> 0.00
6483	66	186 NT2	07/11/90	1.154	0.00	> 100.00	0.00	> 2.70
6484	66	187 NT2	07/11/90	1.094	0.00	< 24.90	0.00	> 0.10
6485	66	23A CEM	08/16/90	0.732	0.00	> 100.00	0.00	> 0.00
6485	66	187 NT2	07/11/90	1.094	0.00	> 100.00	0.00	> 3.20
6486	66	188 NT2	07/11/90	1.177	0.00	< 19.90	0.00	> 0.10
6487	66	188 NT2	07/11/90	1.177	0.00	< 4.83	0.00	> 0.98
6488	66	189 NT2	07/11/90	1.044	0.00	< 5.20	0.33	> 0.50
6489	66	189 NT2	07/11/90	1.044	0.00	< 0.32	0.00	> 0.00
6489	66	229 NT2	08/21/90	1.145	0.00	< 0.03	0.00	> 0.00
6490	66	18A NT2	07/11/90	1.054	0.00	< 4.92	0.00	> 1.00
6491	66	18A NT2	07/11/90	1.054	0.00	< 15.90	0.00	> 2.40
6492	66	18B NT2	07/11/90	1.141	0.00	< 34.00	0.00	> 0.00
6493	66	18B NT2	07/11/90	1.141	0.00	< 3.70	0.00	> 0.00
6494	66	18C NT2	07/11/90	0.960	0.00	< 1.94	0.00	> 0.00
6495	66	238 CEM	08/16/90	0.717	0.00	< 47.40	0.00	> 0.06
6495	66	18C NT2	07/11/90	0.960	0.00	< 25.30	0.00	> 5.29
6496	66	18D NT2	07/11/90	0.978	0.00	< 22.80	0.00	> 3.67
6497	66	18D NT2	07/11/90	0.994	0.00	< 3.29	0.00	> 0.10
6498	66	18Z NT2	07/12/90	1.659	0.00	< 19.60	0.00	> 0.77
6499	66	18Z NT2	07/12/90	1.659	0.00	< 0.32	0.00	> 0.00
6500	66	180 NT2	07/12/90	1.547	0.00	< 100.00	0.00	> 3.99
6501	66	180 NT2	07/12/90	1.547	0.00	< 16.00	0.00	> 4.06
6502	66	181 NT2	07/12/90	1.594	0.00	> 100.00	0.00	> 0.05

## Cumulative Summary (cont'd)

AVG No.	Ship- ment	Plt Cell # Line	Test Date	Diff. mm.	IC 50	TC 25	S1	TA1
6505	16A	13C MT2	06/06/90	0.492	0.00	> 100.00	0.00	> 11.82
6506	16A	140 CEM	07/05/90	1.471	0.00	> 100.00	0.00	> 1.79
6506	16A	1PC MT2	07/04/90	0.892	0.00	> 100.00	0.00	> 15.13
6506	16A	136 MT2	07/17/90	1.239	0.00	200.00	0.00	> 1.04
6507	66	131 MT2	07/11/90	1.594	0.00	> 100.00	0.00	> 3.54
6508	66	132 MT2	07/11/2/90	1.395	0.00	> 100.00	0.00	> 0.11
6509	44	132 MT2	07/12/90	1.395	0.00	5.47	0.00	0.00
6510	16A	180 CEM	07/05/90	1.471	14.30	> 100.00	0.99	> 23.36
6510	16A	1PL MT2	06/06/90	0.836	6.38	> 100.00	15.67	> 43.37
6510	16A	156 MT2	07/17/90	1.239	88.30	318.00	3.60	> 9.49
6510	72	284 MT2	09/06/90	1.160	89.70	> 100.00	1.11	> 8.46
6511	16A	1RR CEM	07/05/90	1.166	2.55	> 100.00	39.16	> 57.01
6511	16A	1PL MT2	06/06/90	0.836	1.73	> 100.00	57.93	> 67.34
6511	16A	158 MT2	07/17/90	1.217	3.12	307.00	96.34	> 37.03
6511	72	281 MT2	09/06/90	1.160	12.40	> 100.00	8.09	> 38.07
6512	15A	1RR CEM	07/05/90	1.166	3.05	> 100.00	32.74	> 58.26
6512	16A	1PM MT2	06/06/90	0.958	5.46	> 100.00	18.32	> 45.49
6512	16A	154 MT2	07/17/90	1.217	3.25	199.00	51.24	> 27.84
6512	72	281 MT2	09/06/90	1.160	12.30	> 100.00	8.11	> 40.18
6579	64	180 MT2	05/09/90	1.023	0.00	49.70	0.00	> 4.14
6707	67	1WR MT2	07/26/90	1.072	0.00	6.92	0.00	> 1.00
6708	67	1UR MT2	07/26/90	1.072	0.00	27.70	0.00	> 0.30
6709	67	148 MT2	07/26/90	1.087	0.00	6.90	0.00	> 0.40
6710	67	1WB MT2	07/26/90	1.087	0.00	> 100.00	0.00	> 3.21
6711	67	1WT MT2	07/26/90	1.116	0.00	54.70	0.00	> 2.00
6712	67	1WT MT2	07/26/90	1.116	0.00	> 100.00	0.00	> 3.30
6713	67	1WU MT2	07/26/90	1.122	0.00	23.30	0.00	> 0.00
6714	67	1WU MT2	07/26/90	1.122	0.00	> 100.00	0.00	> 4.80
6715	67	1WV MT2	07/26/90	1.145	0.00	> 100.00	0.00	> 3.20
6716	67	1WV MT2	07/26/90	1.145	0.00	< 0.32	0.00	0.00
6716	67	21L MT2	06/16/90	1.274	0.00	0.07	0.00	> 0.12
6717	67	1WW MT2	07/26/90	1.164	0.00	0.56	0.00	0.00
6718	67	1WW MT2	07/26/90	1.164	0.00	1.71	0.00	> 0.20
6719	67	1WX MT2	07/26/90	1.091	0.00	1.54	0.00	0.00
6720	67	1WX MT2	07/26/90	1.091	0.00	> 100.00	0.00	> 2.40
6721	67	1WY MT2	07/26/90	1.183	0.00	< 0.32	0.00	0.00
6721	67	21M MT2	06/16/90	1.344	0.00	0.06	0.00	0.00
6722	67	223 CEM	08/14/90	0.951	0.00	> 100.00	0.00	> 5.22
6722	67	1WY MT2	07/26/90	1.183	0.00	> 100.00	0.00	> 2.70
6723	67	1WZ MT2	07/26/90	1.184	0.00	> 100.00	0.00	> 3.19
6724	67	230 CEM	08/16/90	0.697	0.00	0.79	0.00	0.00
6724	67	1WZ MT2	07/26/90	1.184	0.00	< 0.32	0.00	0.00
6725	67	1X0 MT2	07/26/90	1.171	0.00	> 100.00	0.00	> 4.50
6726	67	1X0 MT2	07/26/90	1.171	0.00	51.80	0.00	> 3.46
6726	67	245 MT2	08/21/90	1.196	0.00	0.01	0.00	> 2.52
6727	67	1XB MT2	07/26/90	1.286	0.00	< 0.32	0.00	0.00
6728	67	1XB MT2	07/26/90	1.286	0.00	> 100.00	0.00	> 0.40
6729	67	1X9 MT2	07/26/90	1.296	0.00	15.60	0.00	> 0.80
6730	67	1X9 MT2	07/26/90	1.296	0.00	> 100.00	0.00	> 1.30
6731	67	1XA MT2	07/26/90	1.246	0.00	> 100.00	0.00	> 7.10
6732	67	1XA MT2	07/26/90	1.246	0.00	> 100.00	0.00	> 6.11
6732	67	1XB MT2	07/26/90	1.279	0.00	7.79	0.00	> 1.30
6733	67	1XB MT2	07/26/90	1.279	0.00	> 100.00	0.00	> 16.10
6734	67	1XC MT2	07/26/90	1.251	0.00	< 0.32	0.00	0.00
6735	67	1XC MT2	07/26/90	1.251	0.00	1.46	0.00	> 0.94
6736	67	1XD MT2	07/26/90	1.280	0.00	< 0.32	0.00	0.00
6736	67	245 MT2	08/21/90	1.196	0.00	0.00	0.00	> 1.36
6737	67	1XD MT2	07/26/90	1.280	0.00	< 0.32	0.00	0.00
6737	67	246 MT2	08/21/90	1.200	0.00	0.01	0.00	> 0.33
6738	67	1XE MT2	07/26/90	1.283	0.00	0.51	0.00	> 0.00
6739	67	1XE MT2	07/26/90	1.283	0.00	< 0.32	0.00	0.00
6739	67	246 MT2	08/21/90	1.200	0.00	0.00	0.00	> 0.40
6740	67	1XF MT2	07/26/90	1.183	0.00	< 0.32	0.00	0.00
6740	67	247 MT2	08/21/90	1.218	0.00	0.32	0.00	> 1.40
6761	67	1XF MT2	07/26/90	1.183	0.00	< 0.32	0.00	0.00
6761	67	247 MT2	08/21/90	1.218	0.00	0.03	0.00	> 1.30
6762	67	1YH MT2	07/26/90	1.258	0.00	0.50	0.00	> 0.00
6752	67	248 MT2	08/21/90	0.979	0.00	0.36	0.00	> 1.62
6763	67	1YH MT2	07/26/90	1.268	0.00	< 0.32	0.00	0.00
6763	67	248 MT2	08/21/90	0.979	0.00	0.00	0.00	0.00
6764	67	1VI MT2	07/26/90	1.330	0.00	< 0.32	0.00	0.00
6764	67	249 MT2	08/21/90	1.201	0.00	0.35	0.00	> 1.45
6765	67	1VI MT2	07/26/90	1.330	0.00	< 0.32	0.00	0.00
6765	67	249 MT2	08/21/90	1.291	0.00	0.00	0.00	> 0.10
6766	67	1VX MT2	07/31/90	1.286	0.00	> 100.00	0.00	> 6.80
6767	67	1VX MT2	07/31/90	1.286	0.00	1.60	0.00	> 0.30
6768	67	1VY MT2	07/26/90	1.234	0.00	1.60	0.00	0.00
6769	67	1VY MT2	07/26/90	1.234	0.00	0.51	0.00	0.00

## CUMULATIVE SUMMARY (cont'd)

AVB	Ship-	Plt	Cell	Test	Diff-		IC 50	TC 25	SI	TAT
No.	ment	#	Line	Date	mnt.					
6769	67	228	NT2	08/21/90	1.184	0.00	0.36	0.00	>	0.60
6770	67	1V2	NT2	07/26/90	1.288	0.00	0.32	0.00	>	0.60
6771	67	1VX	NT2	07/26/90	1.288	0.00	0.32	0.00	>	0.60
6772	67	1VY	NT2	07/31/90	1.277	0.00	0.32	0.00	>	0.60
6772	67	21H	NT2	08/16/90	1.344	0.00	0.31	0.00	>	0.60
6773	67	1VY	NT2	07/31/90	1.277	0.00	0.32	0.00	>	0.60
6773	67	21L	NT2	08/16/90	1.250	0.00	0.03	0.00	>	0.60
6774	67	1V2	NT2	07/31/90	1.315	0.00	0.32	0.00	>	0.60
6774	67	21N	NT2	08/16/90	1.250	0.00	0.04	0.00	>	0.60
6777	18A	1V3	CER	07/24/90	0.839	32.70	> 100.00	>	3.06	> 24.53
6777	73	2G1	CER	09/28/90	0.964	11.50	2.65	0.23	>	23.43
6777	18A	1OM	NT2	05/24/90	1.195	0.00	> 100.00	0.00	>	8.78
6777	73	2G6	NT2	09/28/90	1.384	7.65	> 100.00	>	13.08	> 39.18
6777	73	2ZM	NT2	10/26/90	0.877	690.00	> 1000.0	>	1.65	> 16.46
6778	18A	1VT	CER	07/26/90	0.760	0.00	> 100.00	0.00	>	5.33
6778	18A	1OM	NT2	05/24/90	1.195	0.00	> 100.00	0.00	>	6.79
6779	18A	1VT	CER	07/26/90	0.760	0.00	> 100.00	0.00	>	0.00
6779	18A	100	NT2	03/24/90	1.128	0.00	> 100.00	0.00	>	2.99
6780	18A	250	CER	08/21/90	0.744	0.00	> 100.00	0.00	>	1.80
6780	18A	100	NT2	05/24/90	1.128	0.00	> 100.00	0.00	>	3.80
6781	67	1V2	NT2	07/31/90	1.315	0.00	5.11	0.00	>	2.53
6782	67	1W	NT2	07/31/90	1.346	0.00	4.93	0.00	>	2.31
6783	68	212	CER	08/14/90	1.169	53.70	> 100.00	>	1.86	> 12.53
6783	68	1X3	NT2	08/02/90	1.272	0.00	> 100.00	0.00	>	13.19
6786	67	1W	NT2	07/31/90	1.346	0.00	62.20	0.00	>	2.83
6787	67	1W1	NT2	07/31/90	1.268	0.00	15.90	0.00	>	0.40
6788	67	1W1	NT2	07/31/90	1.268	0.00	> 100.00	0.00	>	0.00
6789	67	1YE	NT2	07/31/90	1.303	0.00	1.96	0.00	>	0.00
6790	67	1YE	NT2	07/31/90	1.303	0.00	2.17	0.00	>	0.00
6791	67	1YF	NT2	07/31/90	1.350	0.00	2.62	0.00	>	0.10
6792	67	1YV	NT2	07/31/90	1.350	0.00	< 0.32	0.00	>	0.00
6792	67	229	NT2	08/21/90	1.145	0.00	0.33	0.00	>	0.00
6793	67	1TG	NT2	07/31/90	1.356	0.00	66.70	0.00	>	0.57
6794	58	212	CER	08/14/90	1.169	0.00	> 100.00	0.00	>	0.27
6794	68	1X4	NT2	08/02/90	1.245	0.00	> 100.00	0.00	>	2.30
6795	68	1X4	NT2	08/02/90	1.245	0.00	44.00	0.00	>	1.21
6796	68	1X5	NT2	08/02/90	1.059	0.00	49.00	0.00	>	0.84
6797	68	220	CER	08/14/90	1.391	0.00	> 100.00	0.00	>	0.00
6797	68	1X5	NT2	08/02/90	1.359	0.00	> 100.00	0.00	>	2.90
6798	68	220	CER	08/14/90	1.391	0.00	> 100.00	0.00	>	0.28
6798	58	1X6	NT2	08/02/90	1.301	0.00	> 100.00	0.00	>	2.40
6799	68	221	CER	08/14/90	1.372	0.00	> 100.00	0.00	>	0.00
6799	68	1X6	NT2	08/02/90	1.301	0.00	> 100.00	0.00	>	3.30
6800	58	1X3	NT2	08/07/90	1.129	0.00	55.30	0.00	>	1.00
6801	58	1X3	NT2	08/07/90	1.129	0.00	> 100.00	0.00	>	1.50
6802	68	1XT	NT2	08/07/90	1.123	0.00	> 100.00	0.00	>	0.30
6803	68	221	CER	08/14/90	1.372	0.00	> 100.00	0.00	>	1.27
6803	68	1XT	NT2	08/07/90	1.123	0.00	> 100.00	0.00	>	2.75
6804	68	1XU	NT2	08/07/90	1.123	0.00	> 100.00	0.00	>	2.40
6805	69	1Z5	NT2	08/09/90	1.136	0.00	> 100.00	0.00	>	4.39
6806	58	1XU	NT2	08/07/90	1.123	0.00	6.03	0.00	>	0.90
6807	68	1XY	NT2	08/07/90	1.068	0.00	15.50	0.00	>	2.67
6708	68	1XY	NT2	08/07/90	1.068	0.00	> 100.00	0.00	>	2.10
6809	58	227	NT2	08/21/90	1.131	0.00	29.00	0.00	>	0.00
6810	68	228	NT2	08/21/90	1.184	0.00	> 100.00	0.00	>	1.72
6811	68	1X7	NT2	08/07/90	1.081	0.00	5.92	0.00	>	0.20
6812	68	1X1	NT2	08/07/90	1.081	0.00	> 100.00	0.00	>	3.80
6813	68	1ZK	NT2	08/07/90	1.201	0.00	> 100.00	0.00	>	6.10
6814	68	1ZK	NT2	08/07/90	1.201	0.00	> 100.00	0.00	>	1.50
6815	68	1ZL	NT2	08/07/90	1.201	0.00	> 100.00	0.00	>	6.00
6816	68	1ZL	NT2	08/07/90	1.201	0.00	50.50	0.00	>	6.73
6817	68	1ZM	NT2	08/07/90	1.209	0.00	> 100.00	0.00	>	1.40
6818	68	1ZM	NT2	08/07/90	1.209	84.50	> 100.00	>	1.18	> 12.77
6817	69	1Z5	NT2	08/09/90	1.368	0.00	49.00	0.00	>	1.30
6817	69	1Z6	NT2	08/09/90	1.368	0.00	> 100.00	0.00	>	2.30
6817	69	1Z7	NT2	08/09/90	1.364	0.00	> 100.00	0.00	>	3.08
6817	69	1Z7	NT2	08/09/90	1.364	0.00	53.50	0.00	>	1.62
6816	69	1Z8	NT2	08/09/90	1.152	0.00	> 100.00	0.00	>	3.50
6818	69	1Z8	NT2	08/09/90	1.152	0.00	> 100.00	0.00	>	4.89
6819	69	1Z9	NT2	08/09/90	1.366	0.00	> 100.00	0.00	>	0.90
6820	69	1Z9	NT2	08/09/90	1.366	0.00	24.10	0.00	>	0.30
6821	69	1ZA	NT2	08/09/90	1.193	0.00	6.90	0.00	>	1.11
6822	69	1ZA	NT2	08/09/90	1.193	0.00	15.60	0.00	>	2.43
6823	69	1ZD	NT2	08/09/90	1.272	0.00	> 100.00	0.00	>	1.50
6824	69	1ZD	NT2	08/09/90	1.272	0.00	> 100.00	0.00	>	1.50
6825	69	1ZE	NT2	08/09/90	1.282	0.00	> 100.00	0.00	>	2.70
6826	69	1ZE	NT2	08/09/90	1.282	0.00	49.00	0.00	>	1.20
6827	69	1ZF	NT2	08/09/90	1.181	0.00	18.90	0.00	>	2.05
6828	69	1ZF	NT2	08/09/90	1.181	0.00	> 100.00	0.00	>	3.50

## Cumulative Summary (cont'd)

AVB No.	Ship- ment	Plt #	Cell Line	Test Date	Diff- rential	IC 50	IC 25	\$1	TAI
6886 69		126	MT2	08/09/90	1.163	0.00 > 100.00	0.00 >	2.10	
6890 69		125	MT2	08/09/90	1.163	0.00 > 18.00	0.00 >	0.82	
6891 69		128	MT2	08/09/90	1.251	0.00 > 49.00	0.00 >	2.11	
6892 69		124	MT2	08/09/90	1.251	0.00 > 100.00	0.00 >	0.95	
6893 69		121	MT2	08/09/90	1.274	0.00 > 100.00	0.00 >	1.10	
6894 69		121	MT2	08/09/90	1.274	0.00 > 100.00	0.00 >	0.60	
6895 69		220	MT2	08/14/90	1.294	0.00 > 100.00	0.00 >	1.90	
6896 69		220	MT2	08/14/90	1.294	0.00 > 4.00	0.00 >	0.70	
6897 69		220	MT2	08/14/90	1.292	0.00 > 0.50	0.00 >	0.00	
6898 69		220	MT2	08/14/90	1.292	0.00 > 100.00	0.00 >	0.00	
6899 69		220	MT2	08/14/90	1.227	0.00 > 100.00	0.00 >	0.30	
5900 69		220	MT2	08/14/90	1.227	0.00 > 4.00	0.00 >	0.60	
6901 69		220	MT2	08/14/90	1.276	0.00 > 100.00	0.00 >	0.40	
6902 69		220	MT2	08/14/90	1.276	0.00 > 4.00	0.00 >	0.30	
6903 69		220	MT2	08/14/90	1.230	0.00 > 100.00	0.00 >	3.50	
6904 69		220	MT2	08/14/90	1.230	0.00 > 23.10	0.00 >	0.70	
6905 69		220	MT2	08/14/90	1.236	0.00 > 100.00	0.00 >	5.39	
6906 69		220	MT2	08/14/90	1.236	0.00 > 15.60	0.00 >	3.31	
6907 69		221	MT2	08/14/90	1.232	0.00 > 100.00	0.00 >	0.50	
6908 69		221	MT2	08/14/90	1.232	0.00 > 100.00	0.00 >	1.20	
6909 69		221	MT2	08/14/90	1.298	0.00 < 0.32	0.00 >	0.00	
6910 69		221	MT2	08/14/90	1.298	0.00 > 8.51	0.00 >	0.40	
6911 69		220	MT2	08/14/90	1.234	0.00 > 100.00	0.00 >	1.30	
6912 69		220	MT2	08/14/90	1.234	0.00 > 24.50	0.00 >	1.22	
6913 69		221	MT2	08/14/90	1.184	0.00 > 51.10	0.00 >	2.85	
6914 69		221	MT2	08/14/90	1.184	0.00 > 16.40	0.00 >	0.40	
6915 69		211	MT2	08/14/90	1.342	0.00 > 100.00	0.00 >	2.50	
6916 69		211	MT2	08/14/90	1.342	0.00 > 22.80	0.00 >	0.70	
6917 69		212	MT2	08/14/90	1.337	0.00 > 100.00	0.00 >	1.90	
6918 69		212	MT2	08/14/90	1.337	0.00 > 100.00	0.00 >	2.90	
6919 69		213	MT2	08/14/90	1.300	0.00 > 100.00	0.00 >	0.00	
6920 69		213	MT2	08/14/90	1.300	0.00 > 100.00	0.00 >	1.90	
6921 69		214	MT2	08/14/90	1.333	0.00 > 100.00	0.00 >	1.80	
6922 69		214	MT2	08/14/90	1.333	0.00 > 100.00	0.00 >	1.60	
6923 69		215	MT2	08/14/90	1.321	0.00 > 100.00	0.00 >	7.20	
6924 69		215	MT2	08/14/90	1.321	0.00 > 100.00	0.00 >	0.35	
6925 69		217	MT2	08/15/90	1.342	0.00 > 100.00	0.00 >	4.30	
6926 69		217	MT2	08/15/90	1.342	0.00 > 100.00	0.00 >	3.00	
6927 69		218	MT2	08/15/90	1.462	0.00 > 2.67	0.00 >	2.01	
6928 69		218	MT2	08/15/90	1.462	0.00 > 4.92	0.00 >	1.63	
6929 69		219	MT2	08/15/90	1.370	0.00 > 50.10	0.00 >	1.70	
6930 69		219	MT2	08/15/90	1.370	0.00 > 100.00	0.00 >	6.40	
6931 69		21A	MT2	08/15/90	1.381	0.00 > 4.41	0.00 >	1.80	
6932 69		21A	MT2	08/15/90	1.381	0.00 > 22.80	0.00 >	4.08	
6933 69		218	MT2	08/15/90	1.370	0.00 < 0.32	0.00 >	0.00	
6934 69		218	MT2	08/15/90	1.370	0.00 > 100.00	0.00 >	2.50	
6935 69		21C	MT2	08/15/90	1.406	0.00 > 18.70	0.00 >	1.80	
6936 69		21C	MT2	08/15/90	1.406	0.00 > 62.90	0.00 >	2.83	
6937 69		210	MT2	08/15/90	1.357	0.00 > 100.00	0.00 >	3.19	
6938 69		210	MT2	08/15/90	1.357	0.00 > 60.80	0.00 >	5.44	
6939 69		21E	MT2	08/15/90	1.362	0.00 > 58.90	0.00 >	0.92	
6940 69		21E	MT2	08/15/90	1.362	0.00 > 100.00	0.00 >	2.30	
6941 69		21F	MT2	08/15/90	1.338	0.00 > 100.00	0.00 >	0.60	
6942 74		320	CEM	11/27/90	1.143	36.80 > 100.00	2.72 >	23.27	
6942 69		21F	MT2	08/15/90	1.338	45.70 > 100.00	2.19 >	18.85	
5942 74		371	MT2	11/27/90	0.955	0.00 > 100.00	0.00 >	15.99	
6943 74		320	CEM	11/27/90	1.143	3.73 > 100.00	26.63 >	55.21	
6943 69		21G	MT2	08/15/90	1.322	2.59 > 31.00	11.95 >	61.27	
6944 74		21G	MT2	08/15/90	1.322	12.60 > 100.00	7.96 >	53.08	
6945 74		32E	CEM	11/27/90	1.197	9.18 > 73.30	7.98 >	50.17	
6945 69		209	MT2	08/15/90	1.341	18.30 > 52.70	2.59 >	17.94	
6945 74		37U	MT2	11/27/90	0.887	16.30 > 100.00	7.01 >	41.81	
6946 74		32E	CEM	11/27/90	1.197	90.80 > 100.00	1.10 >	8.85	
6946 69		20R	MT2	08/15/90	1.275	54.10 > 100.00	1.83 >	13.32	
6947 74		37U	MT2	11/27/90	0.887	31.00 > 0.15	0.00 >	16.30	
6947 69		32F	CEM	11/27/90	1.236	3.21 > 100.00	31.11 >	57.18	
6947 74		20R	MT2	08/15/90	1.275	33.40 > 100.00	2.99 >	21.00	
6947 74		37V	MT2	11/27/90	0.867	12.50 > 100.00	8.11 >	52.59	
6948 69		208	MT2	08/15/90	1.324	0.00 > 100.00	0.00 >	0.00	
6949 69		12H	MT2	08/07/90	1.206	0.00 > 100.00	0.00 >	3.10	
6950 69		12H	MT2	08/07/90	1.206	0.00 > 100.00	0.00 >	2.30	
6951 69		120	MT2	08/07/90	1.295	0.00 > 52.00	0.00 >	2.72	
6952 69		120	MT2	08/07/90	1.295	0.00 > 11.40	0.00 >	6.51	
6953 69		12P	MT2	08/07/90	1.234	0.00 > 57.80	0.00 >	6.44	
6954 69		12P	MT2	08/07/90	1.234	0.00 > 100.00	0.00 >	7.60	
6955 69		120	MT2	08/07/90	1.185	0.00 > 61.30	0.00 >	5.92	
6956 69		120	MT2	08/07/90	1.185	0.00 > 100.00	0.00 >	6.50	
6957 69		12R	MT2	08/07/90	1.240	0.00 > 15.90	0.00 >	1.80	

## CUMULATIVE SUMMARY (cont'd)

AVS No.	Ship- ment	Pit Cell # Line	Test Date	Dif- fmtl.	TC 50	TC 25	SI	TAI
6958 68		12R MT2	08/07/90	1.260	0.00 > 100.00	0.00 >	3.89	
6959 68		1X2 MT2	08/07/90	1.283	0.00 > 100.00	0.00 >	1.78	
6960 68		1X2 MT2	08/07/90	1.283	0.00 > 100.00	0.00 >	0.31	
6961 68		1Y0 MT2	08/07/90	1.217	0.00 > 100.00	0.00 >	6.98	
6962 68		1Y0 MT2	08/07/90	1.217	0.00 > 100.00	0.00 >	1.90	
6963 68		1Y1 MT2	08/07/90	1.254	0.00 > 100.00	0.00 >	1.60	
6964 68		1Y1 MT2	08/07/90	1.254	0.00 > 100.00	0.00 >	3.10	
6965 68		1Y2 MT2	08/07/90	1.247	0.00 < 54.40	0.00 >	1.97	
6966 68		1Y2 MT2	08/07/90	1.247	0.00 < 46.00	0.00 >	0.50	
6967 68		1Y3 MT2	08/07/90	1.185	0.00 > 100.00	0.00 >	2.70	
6968 68		1Y3 MT2	08/07/90	1.185	0.00 < 16.30	0.00 >	2.50	
6969 68		1Y1 MT2	08/08/90	1.234	0.00 < 20.20	0.00 >	1.30	
6970 68		1Y1 MT2	08/08/90	1.234	0.00 > 100.00	0.00 >	8.29	
6971 68		1YJ MT2	08/08/90	1.228	0.00 < 0.32	0.00 >	0.00	
6973 68		1YJ MT2	08/08/90	1.228	0.00 < 97.40	0.00 >	3.17	
6974 68		1YK MT2	08/08/90	1.233	0.00 > 100.00	0.00 >	3.60	
6975 68		1YK MT2	08/08/90	1.233	0.00 > 100.00	0.00 >	7.89	
6976 68		1YL MT2	08/08/90	1.257	0.00 > 100.00	0.00 >	4.60	
6977 68		1YL MT2	08/08/90	1.257	0.00 > 100.00	0.00 >	2.59	
6978 68		1YN MT2	08/08/90	1.228	0.00 > 100.00	0.00 >	2.77	
6979 68		1YN MT2	08/08/90	1.228	0.00 > 100.00	0.00 >	5.16	
6980 68		1YN MT2	08/08/90	1.302	0.00 < 49.70	0.00 >	0.12	
6981 68		1YN MT2	08/08/90	1.302	0.00 > 100.00	0.00 >	0.15	
6982 68		1Y0 MT2	08/08/90	1.250	0.00 > 100.00	0.00 >	1.00	
6983 68		1Y0 MT2	08/08/90	1.250	0.00 > 100.00	0.00 >	4.50	
6984 68		1YP MT2	08/08/90	0.645	0.00 > 100.00	0.00 >	10.31	
6985 68		21P MT2	08/16/90	1.343	0.00 < 49.30	0.00 >	1.06	
6986 68		21P MT2	08/16/90	1.343	0.00 < 70.60	0.00 >	2.01	
6987 68		21Q MT2	08/16/90	1.322	0.00 > 100.00	0.00 >	1.20	
6988 68		21Q MT2	08/16/90	1.322	0.00 > 100.00	0.00 >	2.39	
6989 68		21R MT2	08/16/90	1.343	0.00 < 18.50	0.00 >	0.60	
6990 68		21R MT2	08/16/90	1.343	0.00 > 100.00	0.00 >	0.90	
6991 68		21S MT2	08/16/90	1.326	0.00 < 15.60	0.00 >	0.30	
6992 68		21S MT2	08/16/90	1.326	0.00 > 100.00	0.00 >	0.95	
6993 68		21T MT2	08/16/90	1.323	0.00 > 100.00	0.00 >	0.33	
6994 68		21T MT2	08/16/90	1.323	0.00 > 100.00	0.00 >	0.70	
6995 68		21U MT2	08/16/90	1.347	0.00 > 100.00	0.00 >	0.74	
6996 68		21U MT2	08/16/90	1.347	0.00 < 47.70	0.00 >	0.00	
6997 68		21V MT2	08/16/90	1.314	0.00 < 6.97	0.00 >	0.10	
6998 68		21Y MT2	08/16/90	1.314	0.00 < 0.90	0.00 >	0.00	
6999 68		21Y MT2	08/16/90	1.346	0.00 < 0.80	0.00 >	0.00	
7000 68		21W MT2	08/16/90	1.346	0.00 < 1.06	0.00 >	0.00	
7001 69		205 MT2	08/15/90	1.326	0.00 > 100.00	0.00 >	0.70	
7002 69		207 MT2	08/15/90	1.327	0.00 > 100.00	0.00 >	3.89	
7003 69		20 C MT2	08/15/90	1.327	0.00 > 100.00	0.00 >	3.60	
7004 69		20 J MT2	08/15/90	1.311	0.00 < 66.00	0.00 >	3.33	
7005 69		20 U MT2	08/15/90	1.311	0.00 > 100.00	0.00 >	4.30	
7006 69		20 V MT2	08/15/90	1.277	0.00 > 100.00	0.00 >	2.42	
7007 69		20 V MT2	08/15/90	1.277	0.00 > 100.00	0.00 >	2.40	
7008 69		20 W MT2	08/15/90	1.307	0.00 > 100.00	0.00 >	1.92	
7009 69		20 W MT2	08/15/90	1.307	0.00 < 69.80	0.00 >	0.00	
7010 69		20 X MT2	08/15/90	1.354	0.00 > 100.00	0.00 >	0.00	
7011 69		20 X MT2	08/15/90	1.354	0.00 > 100.00	0.00 >	0.20	
7012 69		20 Y MT2	08/15/90	1.346	0.00 < 59.90	0.00 >	0.05	
7013 69		20 Y MT2	08/15/90	1.346	0.00 > 100.00	0.00 >	0.51	
7014 69		20 Z MT2	08/15/90	1.345	0.00 > 100.00	0.00 >	3.02	
7015 69		202 MT2	08/15/90	1.345	0.00 > 100.00	0.00 >	0.00	
7016 69		234 MT2	08/22/90	1.156	0.00 > 100.00	0.00 >	3.30	
7017 69		234 MT2	08/22/90	1.156	0.00 > 100.00	0.00 >	4.00	
7018 69		235 MT2	08/22/90	1.189	0.00 > 100.00	0.00 >	5.89	
7019 69		235 MT2	08/22/90	1.189	0.00 > 100.00	0.00 >	7.18	
7020 69		236 MT2	08/22/90	1.207	0.00 < 19.00	0.00 >	0.70	
7021 69		236 MT2	08/22/90	1.207	0.00 < 100.00	0.00 >	1.80	
7022 69		237 MT2	08/22/90	1.132	0.00 < 25.30	0.00 >	0.00	
7023 69		237 MT2	08/22/90	1.132	0.00 > 100.00	0.00 >	0.43	
7024 69		238 MT2	08/22/90	1.157	0.00 < 15.50	0.00 >	0.90	
7025 69		238 MT2	08/22/90	1.157	0.00 > 100.00	0.00 >	5.98	
7026 69		248 MT2	08/22/90	1.094	0.00 < 23.10	0.00 >	1.41	
7027 69		248 MT2	08/22/90	1.094	0.00 < 4.90	0.00 >	0.20	
7028 69		24C MT2	08/22/90	1.116	0.00 < 5.33	0.00 >	0.91	
7029 69		24C MT2	08/22/90	1.116	0.00 > 100.00	0.00 >	6.58	
7030 69		24D MT2	08/22/90	1.137	0.00 > 100.00	0.00 >	2.30	
7031 69		24D MT2	08/22/90	1.137	0.00 < 52.50	0.00 >	0.80	
7032 69		24E MT2	08/22/90	1.147	0.00 > 100.00	0.00 >	2.50	
7033 69		24E MT2	08/22/90	1.147	0.00 < 95.30	0.00 >	1.77	
7034 69		24F MT2	08/22/90	1.106	0.00 > 100.00	0.00 >	2.98	
7035 69		24F MT2	08/22/90	1.106	0.00 < 160.00	0.00 >	2.27	
7036 69		24G MT2	08/22/90	1.107	0.00 < 69.00	0.00 >	1.60	

## Cumulative Summary (cont'd)

AVB	Ship-	Pkt	Call	Test	Diff-		10 50	10 25	SI	TAS
No.	ment	#	Linc	Date	met.					
7037	69	26G	MT2	08/22/90	1.107	0.00 >	100.00	0.00 >	5.20	
7038	69	26H	MT2	08/22/90	1.130	0.00 >	100.00	0.00 >	8.38	
7039	69	26K	MT2	08/22/90	1.130	0.00 >	100.00	0.00 >	3.79	
7040	69	22W	MT2	08/22/90	1.106	0.00	49.00	0.00 >	2.21	
7041	69	22W	MT2	08/22/90	1.108	0.00 >	100.00	0.00 >	2.20	
7042	69	22W	MT2	08/22/90	1.140	0.00 >	100.00	0.00 >	2.10	
7043	69	22X	MT2	08/22/90	1.140	0.00 >	100.00	0.00 >	1.50	
7044	59	22Y	MT2	08/22/90	1.123	0.00 >	100.00	0.00 >	0.07	
7045	69	22Y	MT2	08/22/90	1.123	0.00 >	100.00	0.00 >	1.10	
7046	69	22Z	MT2	08/22/90	1.123	0.00 >	100.00	0.00 >	1.80	
7047	69	22Z	MT2	08/22/90	1.125	0.00	49.00	0.00 >	2.11	
7048	69	23U	MT2	08/22/90	1.121	0.00 >	100.00	0.00 >	1.60	
7049	69	23U	MT2	08/22/90	1.121	0.00 >	100.00	0.00 >	0.90	
7050	69	23I	MT2	08/22/90	1.109	0.00 >	100.00	0.00 >	3.20	
7051	72	28J	MT2	09/06/90	1.174	0.00 >	100.00	0.00 >	3.02	
7052	72	28J	MT2	09/06/90	1.174	0.00 >	100.00	0.00 >	1.68	
7053	72	28K	MT2	09/06/90	1.126	0.00 >	100.00	0.00 >	3.89	
7054	72	28K	MT2	09/06/90	1.126	0.00 >	100.00	0.00 >	2.90	
7055	72	28L	MT2	09/06/90	1.178	0.00 >	100.00	0.00 >	1.70	
7056	72	28M	MT2	09/06/90	1.178	0.00 >	100.00	0.00 >	1.35	
7057	72	28M	MT2	09/06/90	1.153	0.00 >	100.00	0.00 >	2.90	
7058	72	28N	MT2	09/06/90	1.153	0.00 >	100.00	0.00 >	3.10	
7059	72	28N	MT2	09/06/90	1.227	0.00 >	100.00	0.00 >	4.00	
7060	72	28N	MT2	09/06/90	1.227	0.00	51.50	0.00 >	1.80	
7061	72	28O	MT2	09/06/90	1.187	0.00	52.20	0.00 >	1.60	
7062	72	28O	MT2	09/06/90	1.187	0.00	51.80	0.00 >	2.30	
7063	72	28P	MT2	09/06/90	1.195	0.00 >	100.00	0.00 >	2.00	
7064	72	28P	MT2	09/06/90	1.196	0.00 >	100.00	0.00 >	2.53	
7065	72	28Q	MT2	09/06/90	1.284	0.00 >	100.00	0.00 >	0.50	
7066	72	28Q	MT2	09/06/90	1.284	0.00 >	100.00	0.00 >	3.89	
7067	72	28R	MT2	09/06/90	1.192	0.00 >	100.00	0.00 >	0.35	
7068	72	28R	MT2	09/06/90	1.192	0.00	49.00	0.00 >	3.16	
7069	72	28S	MT2	09/06/90	1.254	0.00	52.50	0.00 >	0.32	
7070	72	299	MT2	09/12/90	1.132	0.00 >	100.00	0.00 >	0.00	
7071	72	299	MT2	09/12/90	1.132	0.00 >	100.00	0.00 >	1.34	
7072	72	29A	MT2	09/12/90	0.991	0.00 >	100.00	0.00 >	2.60	
7073	72	29A	MT2	09/12/90	0.991	0.00	82.50	0.00 >	1.20	
7074	72	29B	MT2	09/12/90	1.072	0.00	54.10	0.00 >	0.30	
7075	72	29B	MT2	09/12/90	1.072	0.00 >	100.00	0.00 >	0.13	
7076	72	29C	MT2	09/12/90	1.073	0.00	13.00	0.00 >	0.00	
7077	72	29C	MT2	09/12/90	1.073	0.00	2.67	0.00 >	0.00	
7078	72	29D	MT2	09/12/90	1.107	0.00	5.61	0.00 >	0.30	
7079	72	29D	MT2	09/12/90	1.107	0.00	18.20	0.00 >	0.00	
7080	72	29E	MT2	09/12/90	1.079	0.00	2.04	0.00 >	0.00	
7081	72	29E	MT2	09/12/90	1.079	0.00	55.90	0.00 >	0.00	
7082	72	29F	MT2	09/12/90	0.893	0.00	1.92	0.00 >	0.00	
7083	72	29F	MT2	09/12/90	0.893	0.00	49.50	0.00 >	0.80	
7084	72	29G	MT2	09/12/90	1.080	0.00	23.80	0.00 >	0.00	
7085	72	29G	MT2	09/12/90	1.080	0.00	17.10	0.00 >	0.00	
7086	72	29H	MT2	09/12/90	1.115	0.00	16.50	0.00 >	0.00	
7087	72	29H	MT2	09/12/90	1.115	0.00	7.45	0.00 >	0.00	
7088	72	2A7	MT2	09/12/90	1.112	0.00	55.90	0.00 >	0.20	
7089	72	2A7	MT2	09/12/90	1.112	0.00 >	100.00	0.00 >	1.70	
7090	72	2A8	MT2	09/12/90	1.048	0.00 >	100.00	0.00 >	1.70	
7091	72	2A8	MT2	09/12/90	1.048	0.00 >	100.00	0.00 >	0.51	
7092	72	2A9	MT2	09/12/90	1.229	0.00 >	100.00	0.00 >	0.02	
7093	72	2A9	MT2	09/12/90	1.229	0.00 >	100.00	0.00 >	0.00	
7094	72	2AA	MT2	09/12/90	1.077	0.00 >	100.00	0.00 >	1.00	
7095	72	2AA	MT2	09/12/90	1.077	0.00 >	100.00	0.00 >	0.00	
7096	72	2AB	MT2	09/12/90	1.122	0.00 >	100.00	0.00 >	0.50	
7097	72	2AB	MT2	09/12/90	1.122	0.00 >	100.00	0.00 >	1.40	
7098	72	2AC	MT2	09/12/90	1.162	0.00 >	100.00	0.00 >	0.00	
7099	70	26E	MT2	08/23/90	1.276	0.00 >	100.00	0.00 >	7.99	
7100	70	26E	MT2	08/23/90	1.276	0.00 >	100.00	0.00 >	4.60	
7101	70	26F	MT2	08/23/90	1.250	0.00	26.20	0.00 >	2.12	
7102	70	26F	MT2	08/23/90	1.250	0.00 >	100.00	0.00 >	5.10	
7103	70	26G	MT2	08/23/90	1.242	0.00 >	100.00	0.00 >	9.30	
7104	70	26G	MT2	08/23/90	1.242	0.00 >	100.00	0.00 >	13.49	
7105	70	26H	MT2	08/23/90	1.291	0.00 >	100.00	0.00 >	7.36	
7106	70	26H	MT2	08/23/90	1.291	0.00 >	100.00	0.00 >	9.70	
7107	70	26I	MT2	08/23/90	1.316	0.00 >	100.00	0.00 >	5.89	
7108	70	23W	MT2	08/23/90	1.342	0.00 >	100.00	0.00 >	3.90	
7109	70	23W	MT2	08/23/90	1.342	0.00 >	100.00	0.00 >	2.80	
7110	70	23X	MT2	08/23/90	1.303	0.00 >	100.00	0.00 >	7.77	
7111	70	23X	MT2	08/23/90	1.303	0.00 >	100.00	0.00 >	7.58	
7112	70	23Y	MT2	08/23/90	1.273	0.00 >	100.00	0.00 >	9.40	
7113	70	23Y	MT2	08/23/90	1.273	0.00	-9.20	0.00 >	5.83	
7114	70	23Z	MT2	08/23/90	1.345	0.00 >	100.00	0.00 >	5.70	

## Cumulative Summary (cont'd)

AVS	Ship- ment	Pkt Cell # Line	Test Date	Diff. mtl.	TC 50	TC 25	SI	TAS
7115	70	232 MT2	08/23/90	1.345	65.20	> 100.00	> 1.53	> 14.56
7116	70	240 MT2	08/23/90	1.320	0.00	> 100.00	0.00	> 10.59
7117	70	240 MT2	08/23/90	1.320	0.00	> 100.00	0.00	> 2.60
7119	69	231 MT2	08/22/90	1.109	0.00	> 100.00	0.00	0.00
7120	69	232 MT2	08/22/90	1.314	0.00	6.18	0.00	> 6.60
7121	69	244 MT2	08/23/90	1.179	0.00	> 100.00	0.00	> 1.62
7122	69	244 MT2	08/23/90	1.179	0.00	> 100.00	0.00	> 1.30
7123	69	244 MT2	08/23/90	1.152	0.00	> 100.00	0.00	> 2.50
7124	69	244 MT2	08/23/90	1.138	0.00	> 100.00	0.00	> 0.90
7125	69	244 MT2	08/23/90	1.199	0.00	> 100.00	0.00	> 0.49
7126	69	244 MT2	08/23/90	1.199	0.00	25.70	0.00	3.51
7127	69	244 MT2	08/23/90	1.191	0.00	5.07	0.00	0.56
7128	69	244 MT2	08/23/90	1.191	0.00	5.90	0.00	0.11
7129	69	244 MT2	08/23/90	1.156	0.00	4.90	0.00	0.00
7130	69	244 MT2	08/23/90	1.156	0.00	5.50	0.00	0.20
7131	69	240 MT2	08/23/90	1.181	0.00	1.55	0.00	> 1.60
7132	69	240 MT2	08/23/90	1.181	0.00	14.80	0.00	0.20
7133	69	239 MT2	08/23/90	1.169	0.00	> 100.00	0.00	> 1.50
7134	69	236 MT2	08/23/90	1.189	0.00	> 100.00	0.00	> 7.80
7135	69	236 MT2	08/23/90	1.189	0.00	0.65	0.00	> 0.03
7136	69	236 MT2	08/23/90	1.119	0.00	18.60	0.00	> 6.67
7137	69	236 MT2	08/23/90	1.119	0.00	> 100.00	0.00	> 3.31
7138	69	231 MT2	08/23/90	1.185	0.00	20.80	0.00	> 5.86
7139	69	231 MT2	08/23/90	1.185	0.00	> 100.00	0.00	0.31
7140	69	231 MT2	08/23/90	1.168	0.00	> 100.00	0.00	> 5.89
7141	69	231 MT2	08/23/90	1.168	0.00	57.40	0.00	> 1.40
7142	69	234 MT2	08/23/90	1.170	0.00	47.70	0.00	> 0.60
7143	69	234 MT2	08/23/90	1.170	0.00	15.80	0.00	> 0.17
7144	69	231 MT2	08/23/90	1.188	0.00	52.40	0.00	> 0.30
7145	69	231 MT2	08/23/90	1.188	0.00	8.37	0.00	> 0.30
7146	69	234 MT2	08/23/90	1.142	0.00	14.70	0.00	> 1.41
7147	69	234 MT2	08/23/90	1.182	0.00	15.00	0.00	> 2.50
7148	69	240 MT2	08/23/90	1.169	0.00	16.20	0.00	> 0.70
7149	69	260 MT2	08/23/90	1.265	0.00	52.20	0.00	> 5.88
7150	69	260 MT2	08/23/90	1.265	0.00	53.80	0.00	> 0.51
7151	72	240 MT2	09/12/90	1.162	0.00	22.20	0.00	> 0.50
7152	72	240 MT2	09/12/90	1.096	0.00	> 100.00	0.00	> 1.40
7153	72	240 MT2	09/12/90	1.096	0.00	15.70	0.00	> 1.30
7154	72	240 MT2	09/12/90	1.369	0.00	17.50	0.00	0.00
7155	72	240 MT2	09/12/90	1.369	0.00	> 100.00	0.00	0.40
7156	72	291 MT2	09/13/90	1.162	0.00	4.90	0.00	> 0.50
7157	72	291 MT2	09/13/90	1.162	0.00	1.55	0.00	0.00
7158	72	296 MT2	09/13/90	1.132	0.00	7.92	0.00	0.00
7159	72	296 MT2	09/13/90	1.132	0.00	> 100.00	0.00	0.00
7160	72	296 MT2	09/13/90	1.158	0.00	49.00	0.00	> 3.22
7161	72	296 MT2	09/13/90	1.158	0.00	30.40	0.00	> 0.40
7162	72	296 MT2	09/13/90	1.133	0.00	75.40	0.00	0.00
7163	72	296 MT2	09/13/90	1.133	0.00	49.50	0.00	0.00
7164	72	296 MT2	09/13/90	1.178	0.00	4.90	0.00	> 0.10
7165	72	296 MT2	09/13/90	1.178	0.00	> 100.00	0.00	> 0.05
7166	72	296 MT2	09/13/90	1.168	0.00	14.60	0.00	> 0.10
7167	72	290 MT2	09/13/90	1.168	0.00	17.10	0.00	0.00
7168	72	299 MT2	09/13/90	1.155	0.00	> 100.00	0.00	0.00
7169	72	299 MT2	09/13/90	1.155	0.00	50.50	0.00	> 1.00
7170	72	299 MT2	09/13/90	1.146	0.00	5.27	0.00	0.00
7171	72	299 MT2	09/13/90	1.146	0.00	54.70	0.00	> 0.05
7172	72	299 MT2	09/13/90	1.140	0.00	> 100.00	0.00	0.00
7173	72	299 MT2	09/13/90	1.140	0.00	8.73	0.00	0.11
7174	72	246 MT2	09/13/90	1.132	0.00	> 100.00	0.00	> 2.60
7175	72	246 MT2	09/13/90	1.132	0.00	5.86	0.00	0.00
7176	72	246 MT2	09/13/90	1.166	0.00	37.20	0.00	0.00
7177	72	246 MT2	09/13/90	1.166	0.00	15.40	0.00	0.00
7178	72	241 MT2	09/13/90	1.087	0.00	28.30	0.00	0.00
7179	72	241 MT2	09/13/90	1.087	0.00	> 100.00	0.00	0.00
7180	72	244 MT2	09/13/90	1.049	0.00	0.94	0.00	> 1.00
7181	72	244 MT2	09/13/90	1.049	0.00	< 0.32	0.00	0.00
7182	72	244 MT2	09/13/90	1.145	0.00	8.35	0.00	0.00
7183	72	244 MT2	09/13/90	1.145	0.00	> 100.00	0.00	0.00
7184	72	241 MT2	09/13/90	1.090	0.00	> 100.00	0.00	0.00
7185	72	241 MT2	09/13/90	1.090	0.00	> 100.00	0.00	0.00
7186	72	244 MT2	09/13/90	1.154	0.00	> 100.00	0.00	0.00
7187	72	244 MT2	09/13/90	1.154	0.00	> 100.00	0.00	0.00
7188	72	244 MT2	09/13/90	1.096	0.00	18.20	0.00	0.00
7189	72	244 MT2	09/13/90	1.096	0.00	44.90	0.00	0.00
7190	72	240 MT2	09/13/90	1.117	0.00	9.50	0.00	0.00
7191	72	240 MT2	09/13/90	1.117	0.00	> 100.00	0.00	0.00
7192	72	242 MT2	09/13/90	0.972	0.00	6.26	0.00	0.00
7193	72	243 MT2	09/13/90	0.996	0.00	> 100.00	0.00	0.20

## CUMULATIVE SUMMARY (cont'd)

AVS	Ship No.	Pit Count	Test Date	Diff. mtl.	TC 50	TC 25	SI	TAS
7194	72	283 MT2	09/13/90	0.996	0.00	49.00	0.00 >	0.32
7195	72	284 MT2	09/13/90	0.930	0.00	62.40	0.00 >	0.10
7196	72	284 MT2	09/13/90	0.930	0.00 >	100.00	0.00	0.40
7197	72	285 MT2	09/13/90	0.793	0.00	49.00	0.00	2.61
7198	72	285 MT2	09/13/90	0.793	0.00 >	100.00	0.00 >	0.30
7199	72	286 MT2	09/13/90	1.077	0.00 >	100.00	0.00	0.50
7200	72	286 MT2	09/13/90	1.077	0.00 >	100.00	0.00	0.32
7201	72	287 MT2	09/13/90	0.994	0.00	52.70	0.00 >	0.38
7202	72	287 MT2	09/13/90	0.994	0.00	37.90	0.00 >	1.20
7203	72	288 MT2	09/13/90	1.053	0.00	67.40	0.00	1.03
7204	72	288 MT2	09/13/90	1.053	0.00	64.70	0.00	0.30
7205	72	289 MT2	09/13/90	1.048	0.00 >	100.00	0.00 >	2.13
7206	72	289 MT2	09/13/90	1.048	0.00	15.70	0.00	2.79
7207	72	290 CEM	09/25/90	0.994	8.47	15.60	1.05	7.97
7207	73	340 CEM	12/06/90	0.580	1.65	7.06	4.29 >	27.15
7207	72	290 MT2	09/25/90	1.052	0.00	5.82	0.00 >	0.40
7207	73	345 MT2	12/06/90	0.718	2.14	24.10	11.29	28.94
7208	72	290 CEM	09/25/90	0.994	2.73	6.78	1.75 >	11.17
7208	73	340 CEM	12/06/90	0.580	0.47	0.20	0.42	37.11
7208	72	290 MT2	09/25/90	1.052	0.00	2.45	0.00 >	3.82
7208	73	345 MT2	12/06/90	0.718	0.58	12.20	20.87 >	50.25
7209	72	290 CEM	09/25/90	0.935	0.00	5.33	0.00	0.20
7209	72	290 MT2	09/25/90	1.046	0.00	4.86	0.00 >	1.05
7210	72	290 CEM	09/25/90	0.935	0.00	8.51	0.00	0.00
7210	72	290 MT2	09/25/90	1.046	0.00	24.90	0.00 >	2.86
7211	72	290 CEM	09/25/90	0.993	0.50	0.32	0.00	0.00
7211	72	290 MT2	09/25/90	1.076	0.00	5.47	0.00 >	4.59
7212	72	290 CEM	09/25/90	0.993	0.00	18.50	0.00	0.00
7212	72	290 MT2	09/25/90	1.076	0.00	17.40	0.00 >	3.19
7213	72	290 CEM	09/25/90	1.060	0.00	8.64	0.00	0.00
7213	72	290 MT2	09/25/90	1.011	0.00	30.80	0.00 >	1.85
7214	72	290 CEM	09/25/90	1.060	0.00	4.93	0.00	0.12
7214	72	290 MT2	09/25/90	1.011	0.00	1.73	0.00 >	0.99
7215	72	290 CEM	09/25/90	0.983	0.00	7.15	0.00	0.00
7215	72	290 MT2	09/25/90	1.076	0.00	2.31	0.00 >	0.99
7216	72	290 CEM	09/25/90	0.983	0.00	1.00	0.00	0.00
7216	72	290 MT2	09/25/90	0.980	0.00	40.20	0.00 >	1.79
7217	72	290 CEM	09/25/90	0.998	0.00	21.30	0.00	0.54
7217	72	290 MT2	09/25/90	1.027	0.00	40.10	0.00 >	6.63
7218	72	290 CEM	09/25/90	0.998	0.00 >	100.00	0.00 >	1.15
7218	72	290 MT2	09/25/90	1.027	0.00 >	100.00	0.00 >	1.80
7219	73	291 CEM	09/25/90	1.166	0.00	16.40	0.00	0.10
7219	73	291 MT2	09/25/90	1.001	0.00	17.20	0.00	2.20
7220	73	291 CEM	09/25/90	1.166	97.30	0.90	0.61 >	3.24
7220	73	291 MT2	09/25/90	1.001	0.00 >	100.00	0.00 >	11.29
7221	73	291 CEM	09/25/90	1.084	0.00	18.30	0.00	0.00
7221	73	291 MT2	09/25/90	0.964	0.00 >	100.00	0.00	6.81
7222	73	291 CEM	09/25/90	1.084	0.00	16.10	0.00	0.05
7222	73	291 MT2	09/25/90	0.964	0.00	18.00	0.00 >	4.10
7223	73	291 CEM	09/25/90	1.036	0.00	24.00	0.00	0.01
7223	73	291 MT2	09/25/90	0.983	0.00	85.10	0.00	9.72
7224	73	291 CEM	09/25/90	1.056	0.00	23.40	0.00	1.61
7226	73	291 MT2	09/25/90	0.983	0.00	16.80	0.00 >	6.41
7225	73	291 CEM	09/25/90	1.053	0.00	2.17	0.00	0.00
7225	73	291 MT2	09/25/90	1.018	0.00	1.69	0.00 >	0.30
7226	73	291 CEM	09/25/90	1.053	0.00	57.50	0.00	0.86
7226	73	291 MT2	09/25/90	1.018	0.00	46.50	0.00 >	5.67
7227	73	291 CEM	09/25/90	1.102	0.00 >	100.00	0.00 >	3.73
7227	73	291 MT2	09/25/90	1.001	0.00 >	100.00	0.00 >	12.69
7228	73	291 CEM	09/25/90	1.002	0.00 >	100.00	0.00	0.15
7228	73	291 MT2	09/25/90	1.001	0.00 >	100.00	0.00 >	12.81
7229	73	291 CEM	09/25/90	0.909	0.00	47.10	0.00 >	0.13
7229	73	291 MT2	09/25/90	1.046	0.00	56.30	0.00 >	3.20
7230	73	291 CEM	09/25/90	0.909	0.00	10.50	0.00	0.06
7230	73	291 MT2	09/25/90	1.046	0.00	26.20	0.00 >	3.64
7231	73	292 CEM	09/25/90	1.036	0.00	3.77	0.00	0.00
7231	73	292 MT2	09/25/90	1.051	0.00	2.93	0.00 >	0.83
7232	73	292 CEM	09/25/90	1.036	0.00 >	100.00	0.00 >	5.79
7232	73	292 MT2	09/25/90	1.051	0.00	16.60	0.00 >	4.95
7233	73	292 CEM	09/25/90	1.110	0.00	22.70	0.00 >	0.60
7233	73	292 MT2	09/25/90	0.960	0.00	34.60	0.00	1.92
7234	73	292 CEM	09/25/90	1.110	0.00	6.38	0.00 >	0.90
7234	73	292 MT2	09/25/90	0.960	0.00	~ 66	0.00 >	0.10
7235	73	291 CEM	09/25/90	1.015	0.00	2.61	0.00	0.00
7235	73	291 MT2	09/25/90	1.177	0.00	1.30	0.00 >	0.64
7236	73	291 CEM	09/25/90	1.015	0.00 >	100.00	0.00 >	0.80
7236	73	291 MT2	09/25/90	1.177	0.00	20.00	0.00 >	5.89
7237	73	292 CEM	09/25/90	0.971	0.00	14.30	0.00 >	0.06

## CUMULATIVE SUMMARY (cont'd)

AVG	Ship- ment	Plt Cell # Line	Test Date	Diff- rmtl.	TC 30	TC 25	SI	TAI
7237	73	ZCT MT2	09/25/90	1.058	0.00	17.30	0.00 >	1.30
7238	73	ZC2 CEM	09/25/90	0.971	0.00	9.50	0.00 >	0.00
7238	73	ZCT MT2	09/25/90	1.058	0.00	5.78	0.00 >	0.50
7239	73	ZC3 CEM	09/25/90	1.008	0.00	47.10	0.00 >	0.01
7239	73	ZC1 MT2	09/25/90	1.104	0.00	27.70	0.00 >	3.96
7240	73	ZC3 CEM	09/25/90	1.006	0.00	21.00	0.00 >	5.21
7240	73	ZC1 MT2	09/25/90	1.104	0.00	16.00	0.00 >	4.39
7241	73	ZC4 CEM	09/25/90	1.025	82.00	0.93	0.01 >	5.06
7241	73	ZCY MT2	11/20/90	0.896	56.80	490.00	8.66 >	24.87
7241	73	ZCY MT2	09/25/90	1.027	0.00	46.30	0.00 >	7.81
7242	73	ZC4 CEM	09/25/90	1.025	0.00	12.50	0.00 >	0.13
7242	73	ZCY MT2	09/25/90	1.027	0.00	12.30	0.00 >	2.70
7243	73	ZC1 CEM	09/25/90	0.926	0.00	11.10	0.00 >	5.61
7243	73	ZC1 MT2	09/25/90	1.046	0.00	5.50	0.00 >	2.59
7244	73	ZET CEM	09/27/90	0.932	0.00	11.40	0.00 >	5.83
7244	73	ZED MT2	09/27/90	1.080	0.00	6.18	0.00 >	3.18
7245	73	ZET CEM	09/27/90	0.932	0.00 >	100.00	0.00 >	4.62
7245	73	ZED MT2	09/27/90	1.080	0.00 >	100.00	0.00 >	2.24
7246	73	ZE2 CEM	09/27/90	0.892	0.00 >	100.00	0.00 >	11.60
7246	73	ZEE MT2	09/27/90	1.341	0.00 >	100.00	0.00 >	6.40
7247	73	ZEE CEM	09/27/90	0.892	0.00	7.63	0.00 >	2.11
7247	73	ZEL MT2	09/27/90	1.041	0.00	13.60	0.03 >	0.80
7248	73	ZFO CEM	09/27/90	0.905	0.00	34.60	0.00 >	1.88
7248	73	ZEF MT2	09/27/90	0.932	0.00	49.00	0.00 >	3.92
7249	73	ZFO CEM	09/27/90	0.905	0.00 >	100.00	0.00 >	0.24
7249	73	ZEF MT2	09/27/90	0.932	0.00 >	100.00	0.00 >	2.17
7250	73	ZFI CEM	09/27/90	0.820	0.00	53.20	0.00 >	9.30
7250	73	ZEG MT2	09/27/90	1.062	0.00	51.50	0.00 >	6.97
7251	73	ZFI CEM	09/27/90	0.820	0.00 >	100.00	0.00 >	1.61
7251	73	ZEG MT2	09/27/90	1.062	0.00 >	100.00	0.00 >	1.79
7252	73	ZF2 CEM	09/27/90	0.857	0.00	7.96	0.00 >	0.61
7252	73	ZEH MT2	09/27/90	0.832	0.00	6.38	0.00 >	0.00
7253	73	ZF2 CEM	09/27/90	0.857	0.00	12.50	0.00 >	0.00
7253	73	ZEH MT2	09/27/90	0.842	0.00	15.80	0.00 >	0.89
7254	73	ZF3 CEM	09/27/90	1.015	0.00	5.22	0.00 >	5.28
7254	73	ZEI MT2	09/27/90	0.918	0.00	5.44	0.00 >	0.00
7255	73	ZF3 CEM	09/27/90	1.015	0.00	14.70	0.00 >	2.17
7255	73	ZEI MT2	09/27/90	0.918	0.00	25.30	0.00 >	0.50
7256	73	ZF4 CEM	09/27/90	0.864	0.00	5.90	0.00 >	5.35
7256	73	ZEZ MT2	09/27/90	1.043	0.00	5.70	0.00 >	3.67
7257	73	ZF4 CEM	09/27/90	0.864	0.00	4.17	0.00 >	0.89
7257	73	ZEJ MT2	09/27/90	1.043	0.00	3.20	0.00 >	2.27
7258	73	ZF5 CEM	09/27/90	0.795	0.00	5.07	0.00 >	6.25
7258	73	ZEK MT2	09/27/90	1.043	0.00	4.92	0.00 >	3.91
7259	73	ZF5 CEM	09/27/90	0.795	0.00	48.30	0.00 >	7.00
7259	73	ZEK MT2	09/27/90	1.043	0.00	63.50	0.00 >	6.53
7260	73	ZF6 CEM	09/27/90	0.822	0.00	13.90	0.00 >	0.00
7260	73	ZEL MT2	09/27/90	1.047	0.00	15.60	0.00 >	5.53
7261	73	ZF6 CEM	09/27/90	0.822	0.00	3.20	0.00 >	0.25
7261	73	ZEL MT2	09/27/90	1.047	0.00	5.38	0.00 >	1.89
7262	73	ZF7 CEM	09/27/90	0.875	0.00	5.70	0.00 >	1.29
7262	73	ZEM MT2	09/27/90	1.094	0.00	5.82	0.00 >	2.39
7263	73	ZF7 CEM	09/27/90	0.875	0.00	12.00	0.00 >	0.30
7263	73	ZEK MT2	09/27/90	1.094	0.00	15.50	0.00 >	3.84
7264	73	ZF8 CEM	09/27/90	0.920	0.00	7.34	0.00 >	0.00
7264	73	ZEM MT2	09/27/90	1.084	0.00	7.23	0.00 >	0.80
7265	73	ZF8 CEM	09/27/90	0.920	0.00	43.20	0.00 >	1.70
7265	73	ZEM MT2	09/27/90	1.084	0.00	29.60	0.00 >	0.58
7266	73	ZF9 CEM	09/27/90	0.655	0.00	23.80	0.00 >	0.51
7266	73	ZEO MT2	09/27/90	1.046	0.00	14.00	0.00 >	3.27
7267	73	ZF9 CEM	09/27/90	0.659	0.00	5.86	0.00 >	8.70
7267	73	ZEO MT2	09/27/90	1.046	0.00	5.33	0.00 >	2.89
7268	73	ZFA CEM	09/27/90	0.710	0.00	5.21	0.00 >	0.00
7268	73	ZEP MT2	09/27/90	1.119	0.00	3.72	0.00 >	0.44
7269	73	ZDA CEM	09/26/90	0.573	0.00	5.92	0.00 >	0.38
7269	73	ZD5 MT2	09/26/90	0.783	0.00	2.87	0.00 >	0.39
7270	73	ZD8 CEM	09/26/90	0.575	0.00	53.40	0.00 >	1.00
7270	73	ZD5 MT2	09/23/90	0.783	0.00	60.00	0.00 >	1.32
7271	73	ZD8 CEM	09/26/90	0.515	0.00	9.27	0.00 >	0.74
7271	73	ZD6 MT2	09/26/90	0.699	0.00	3.74	0.00 >	0.97
7272	73	ZD8 CEM	09/26/90	0.515	0.00	15.80	0.00 >	0.24
7272	73	ZD6 MT2	09/26/90	0.699	0.00	5.12	0.00 >	0.40
7273	73	ZD1 CEM	09/26/90	0.704	0.00	78.10	0.00 >	6.43
7273	73	ZD7 MT2	09/26/90	0.715	0.00	55.40	0.00 >	2.12
7274	73	ZD1 CEM	09/26/90	0.704	0.00	18.20	0.00 >	0.67
7274	73	ZD7 MT2	09/26/90	0.715	0.00	10.30	0.00 >	2.07
7275	73	ZD0 CEM	09/26/90	0.748	0.00	4.59	0.00 >	0.49
7275	73	ZD8 MT2	09/26/90	0.712	0.00	1.33	0.00 >	0.04

## CUMULATIVE SUMMARY (cont'd)

AVG	Ship- ment	Pit Cell #	Test Line	Date	Diff- mtl.	IC 50	TC 25	SI	TAI
7276	73	20U	CEM	09/26/90	0.748	0.00	95.50	0.00	0.00
7276	73	20B	MT2	09/26/90	0.712	0.00	26.50	0.00	1.19
7277	73	20V	CEM	09/26/90	0.603	0.00	6.35	0.00	2.55
7277	73	209	MT2	09/26/90	0.739	0.00	5.40	0.00	1.63
7278	73	20Y	CEM	09/26/90	0.503	0.00	< 0.32	0.00	0.00
7278	73	209	MT2	09/26/90	0.739	0.00	2.85	0.00	0.00
7279	73	20W	CEM	09/26/90	0.503	0.00	70.30	0.00	0.14
7279	73	20A	MT2	09/26/90	0.835	0.00	5.98	0.00	0.85
7280	73	20W	CEM	09/26/90	0.593	0.00	17.30	0.00	0.98
7280	73	20A	MT2	09/26/90	0.835	0.00	11.00	0.00	0.20
7281	73	360	CEM	11/20/90	0.904	0.00	21.70	0.00	0.60
7281	73	20B	MT2	09/26/90	0.666	0.00	10.50	0.00	4.61
7282	73	20X	CEM	09/26/90	0.780	0.00	3.26	0.00	0.00
7282	73	20B	MT2	09/26/90	0.664	0.00	32.00	0.00	2.30
7283	73	20Y	CEM	09/26/90	0.611	0.00	15.50	0.00	0.00
7283	73	20C	MT2	09/26/90	0.733	0.00	7.92	0.00	5.48
7284	73	20Y	CEM	09/26/90	0.611	0.00	7.92	0.00	1.40
7284	73	20C	MT2	09/26/90	0.733	0.00	5.55	0.00	3.33
7285	73	20Z	CEM	09/26/90	0.712	0.00	7.23	0.00	0.00
7285	73	200	MT2	09/26/90	0.686	0.00	10.00	0.00	7.71
7286	73	20Z	CEM	09/26/90	0.712	0.00	11.10	0.00	3.10
7286	73	200	MT2	09/26/90	0.686	0.00	8.17	0.00	4.89
7287	73	200	CEM	09/26/90	0.645	0.00	12.10	0.00	0.00
7287	73	20E	MT2	09/26/90	0.711	0.00	15.20	0.00	0.00
7288	73	200	CEM	09/26/90	0.645	0.00	24.90	0.00	0.00
7288	73	20E	MT2	09/26/90	0.711	0.00	5.21	0.00	1.38
7289	73	201	CEM	09/26/90	0.674	0.00	0.23	0.00	0.00
7289	73	20F	MT2	09/26/90	0.671	0.00	8.19	0.00	1.40
7290	73	201	CEM	09/26/90	0.674	0.00	5.66	0.00	3.17
7290	73	20F	MT2	09/26/90	0.671	0.00	4.22	0.00	0.69
7291	73	202	CEM	09/26/90	0.596	0.00	22.60	0.00	0.13
7291	73	20G	MT2	09/26/90	0.728	0.00	7.28	0.00	0.97
7292	73	202	CEM	09/26/90	0.596	0.00	66.00	0.00	2.87
7292	73	20G	MT2	09/26/90	0.728	0.00	38.50	0.00	0.51
7293	73	203	CEM	09/26/90	0.553	0.00	33.20	0.00	1.16
7293	73	20H	MT2	09/26/90	0.711	0.00	1.10	0.00	0.00
7294	73	203	CEM	09/26/90	0.553	0.00	9.11	0.00	3.82
7294	73	20H	MT2	09/26/90	0.711	0.00	6.84	0.00	0.00
7295	73	204	CEM	09/26/90	0.632	2.56	56.10	21.89	48.98
7295	73	36Y	CEM	11/20/90	0.703	16.00	> 100.00	7.13	> 33.59
7295	73	500	CEM	12/04/90	0.578	0.00	40.20	0.00	0.00
7295	73	34L	CEM	01/04/91	1.235	6.70	> 100.00	16.73	> 30.32
7295	73	201	XT2	09/26/90	0.826	11.00	> 48.60	4.61	23.01
7295	73	20J	MT2	10/24/90	0.818	4.44	> 100.00	22.54	> 51.71
7295	73	346	MT2	12/04/90	0.663	0.00	60.00	0.00	0.12
7296	73	204	CEM	09/26/90	0.632	60.60	> 100.00	1.65	> 21.16
7296	73	201	MT2	09/26/90	0.826	0.00	> 100.00	0.00	> 0.60
7298	70	261	MT2	08/23/90	1.284	0.00	> 100.00	0.00	> 1.90
7299	70	261	MT2	08/23/90	1.284	0.00	49.70	0.00	2.65
7300	70	242	MT2	08/23/90	1.272	0.00	> 100.00	0.00	> 7.13
7301	70	242	MT2	08/23/90	1.272	0.00	> 100.00	0.00	> 10.29
7302	70	263	MT2	08/23/90	1.315	0.00	45.90	0.00	6.53
7303	70	243	MT2	08/23/90	1.315	0.00	> 100.00	0.00	> 8.90
7304	70	25F	MT2	08/29/90	1.282	0.00	> 100.00	0.00	3.70
7305	70	25G	MT2	08/29/90	1.294	0.00	> 100.00	0.00	4.70
7306	70	25G	MT2	08/29/90	1.296	0.00	> 100.00	0.00	6.00
7307	70	25H	MT2	08/29/90	1.338	0.00	> 100.00	0.00	4.50
7308	70	25H	MT2	08/29/90	1.338	0.00	> 100.00	0.00	7.20
7309	70	25I	MT2	08/29/90	1.351	0.00	> 100.00	0.00	4.90
7310	70	25I	MT2	08/29/90	1.351	0.00	> 100.00	0.00	4.50
7311	70	25J	MT2	08/29/90	1.233	0.00	> 100.00	0.00	3.50
7312	70	25J	MT2	08/29/90	1.333	0.00	> 100.00	0.00	5.19
7313	70	25L	MT2	08/30/90	1.560	0.00	> 100.00	0.00	0.51
7314	70	25L	MT2	08/30/90	1.560	0.00	> 100.00	0.00	1.20
7315	70	25M	MT2	08/30/90	1.411	0.00	> 100.00	0.00	1.00
7316	70	25M	MT2	08/30/90	1.411	0.00	> 100.00	0.00	1.60
7317	70	25N	MT2	08/30/90	1.406	0.00	> 100.00	0.00	2.40
7318	70	25N	MT2	08/30/90	1.480	0.00	> 100.00	0.00	0.24
7319	70	25O	MT2	08/30/90	1.479	0.00	3.10	0.00	0.40
7320	70	25O	MT2	08/30/90	1.479	0.00	49.30	0.00	0.14
7321	70	25P	MT2	08/30/90	1.419	0.00	15.80	0.00	0.60
7322	70	25P	MT2	08/30/90	1.419	0.00	> 100.00	0.00	0.70
7323	70	25Q	MT2	08/30/90	1.471	0.00	> 100.00	0.00	1.30
7324	70	25Q	MT2	08/30/90	1.471	0.00	> 100.00	0.00	2.10
7325	70	25R	MT2	08/30/90	1.289	0.00	12.00	0.00	1.59
7326	70	25R	MT2	08/30/90	1.289	0.00	> 100.00	0.00	3.25
7327	70	25S	MT2	08/30/90	1.510	0.00	> 100.00	0.00	2.00
7328	70	25S	MT2	08/30/90	1.510	0.00	9.00	0.00	0.10

## Cumulative Summary (cont'd)

AVS	Ship-	Plt Cell	Test	diff-	IC 50	TC 25	SI	TAI
No.	ment	# Line	Date	mtl.				
7329	70	252	MT2	08/29/90	1.329	0.00 > 100.00	0.00	8.13
7330	70	252	MT2	08/29/90	1.329	0.00 > 100.00	0.00 >	0.05
7331	70	253	MT2	08/29/90	1.327	0.00 > 100.00	0.00 >	0.70
7332	70	253	MT2	08/29/90	1.327	0.00 > 100.00	0.00 >	7.52
7333	70	254	MT2	08/29/90	1.316	0.00 > 100.00	0.00 >	1.69
7334	70	254	MT2	08/29/90	1.316	0.00 > 49.50	0.00	0.00
7335	70	255	MT2	08/29/90	1.348	0.00 > 100.00	0.00 >	2.35
7336	70	255	MT2	08/29/90	1.348	0.00 > 100.00	0.00 >	3.10
7337	70	256	MT2	08/29/90	1.298	0.00 > 100.00	0.00 >	0.85
7338	70	256	MT2	08/29/90	1.298	0.30 > 100.00	0.00 >	0.08
7339	70	257	MT2	08/29/90	1.262	0.00 > 57.40	0.00	0.32
7340	70	257	MT2	08/29/90	1.262	0.00 > 100.00	0.00 >	0.10
7341	70	258	MT2	08/29/90	1.329	0.00 > 15.50	0.00 >	1.11
7342	70	258	MT2	08/29/90	1.329	0.00 > 13.50	0.00	0.64
7343	70	259	MT2	08/29/90	1.302	0.00 > 100.00	0.00 >	0.30
7344	70	259	MT2	08/29/90	1.302	0.30 > 100.00	0.00 >	0.65
7345	70	259	MT2	08/29/90	1.292	0.00 > 52.00	0.00	5.58
7346	70	259	MT2	08/25/90	1.292	0.00 > 100.00	0.00 >	5.00
7347	70	259	MT2	08/29/90	1.308	0.00 > 100.00	0.00 >	3.90
7348	70	259	MT2	08/29/90	1.308	0.00 > 100.00	0.00 >	4.10
7349	70	259	MT2	08/29/90	1.308	0.00 > 100.00	0.00 >	4.56
7350	70	259	MT2	08/29/90	1.301	0.00 > 49.90	0.00 >	3.60
7351	70	259	MT2	08/29/90	1.301	0.00 > 100.00	0.00 >	0.60
7352	70	259	MT2	08/29/90	1.292	0.00 > 40.60	0.00 >	1.31
7353	70	259	MT2	08/29/90	1.292	0.00 > 100.00	0.00 >	2.30
7354	70	259	MT2	08/29/90	1.282	0.00 > 100.00	0.00 >	3.40
7355	70	259	MT2	08/30/90	1.504	0.00 > 100.00	0.00 >	1.10
7356	70	259	MT2	08/30/90	1.496	0.00 > 49.90	0.00 >	1.60
7357	70	259	MT2	08/30/90	1.496	0.00 > 49.90	0.00 >	0.50
7358	70	259	MT2	08/30/90	1.496	0.00 > 100.00	0.00 >	0.70
7359	70	259	MT2	08/30/90	1.371	0.00 > 100.00	0.00 >	0.11
7360	70	259	MT2	08/30/90	1.371	0.00 > 100.00	0.00 >	0.27
7361	70	259	MT2	08/30/90	1.409	0.00 > 100.00	0.00 >	0.00
7362	70	259	MT2	08/30/90	1.409	0.00 > 100.00	0.00 >	0.00
7363	70	259	MT2	08/30/90	1.578	0.00 > 100.00	0.00 >	0.93
7364	70	259	MT2	08/30/90	1.578	0.00 > 100.00	0.00 >	0.60
7365	70	259	MT2	08/30/90	1.522	0.00 > 100.00	0.00 >	2.10
7366	70	259	MT2	08/30/90	1.522	0.00 > 100.00	0.00 >	1.90
7367	70	259	MT2	08/30/90	1.514	0.00 > 100.00	0.00 >	1.70
7368	70	259	MT2	08/30/90	1.514	0.00 > 100.00	0.00 >	1.03
7369	70	261	MT2	08/30/90	1.516	0.00 > 100.00	0.00 >	0.80
7370	70	261	MT2	08/30/90	1.571	0.00 > 100.00	0.00 >	0.23
7371	70	261	MT2	08/30/90	1.571	0.00 > 15.20	0.00 >	0.23
7372	70	262	MT2	08/30/90	1.435	0.00 > 63.50	0.00 >	2.12
7373	70	262	MT2	08/30/90	1.435	0.00 > 72.50	0.00 >	0.30
7374	70	262	MT2	08/30/90	1.514	0.00 > 15.50	0.00 >	0.70
7375	70	263	MT2	08/30/90	1.516	0.00 > 49.00	0.00 >	1.00
7376	70	264	MT2	08/30/90	1.427	0.00 > 50.50	0.00 >	0.60
7377	70	264	MT2	08/30/90	1.427	0.00 > 100.00	0.00 >	0.50
7378	70	265	MT2	08/30/90	1.538	0.00 > 100.00	0.00 >	1.56
7379	70	265	MT2	08/30/90	1.538	0.00 > 100.00	0.00 >	0.05
7380	70	266	MT2	08/30/90	1.482	0.00 > 100.00	0.00 >	3.77
7381	70	266	MT2	08/30/90	1.482	*9.90 > 100.00	>	15.63
7382	70	267	MT2	08/30/90	1.507	0.00 > 100.00	0.00 >	2.30
7383	70	267	MT2	08/30/90	1.507	0.00 > 100.00	0.00 >	1.80
7384	70	272	MT2	08/30/90	1.347	0.00 > 100.00	0.00 >	0.00
7385	70	272	MT2	08/30/90	1.347	0.00 > 100.00	0.00 >	0.50
7386	70	280	MT2	08/30/90	1.328	0.00 > 100.00	0.00 >	0.08
7387	70	280	MT2	08/30/90	1.328	0.00 > 100.00	0.00 >	7.46
7388	70	280	MT2	08/30/90	1.328	0.00 > 100.00	0.00 >	0.00
7389	70	281	MT2	08/30/90	1.328	0.00 > 100.00	0.00 >	1.10
7390	70	281	MT2	08/30/90	1.328	0.00 > 100.00	0.00 >	1.60
7391	70	282	MT2	08/30/90	1.309	0.00 > 100.00	0.00 >	0.00
7392	70	282	MT2	08/30/90	1.309	0.00 > 100.00	0.00 >	0.00
7393	70	284	MT2	09/05/90	1.280	0.00 > 100.00	0.00 >	0.81
7394	70	284	MT2	09/05/90	1.280	0.00 > 100.00	0.00 >	0.26
7395	70	284	MT2	09/05/90	1.250	0.00 > 100.00	0.00 >	1.20
7396	70	284	MT2	09/05/90	1.250	0.00 > 100.00	0.00 >	1.07
7397	70	284	MT2	09/05/90	1.178	0.00 > 100.00	0.00 >	0.63
7398	70	284	MT2	09/05/90	1.178	0.00 > 100.00	0.00 >	0.00
7399	70	285	MT2	09/05/90	1.112	0.00 > 100.00	0.00 >	0.00
7400	70	285	MT2	09/05/90	1.112	0.00 > 100.00	0.00 >	0.00
7401	70	270	MT2	09/05/90	1.252	0.00 > 100.00	0.00 >	0.00
7402	70	270	MT2	09/05/90	1.252	0.00 > 100.00	0.00 >	0.26
7403	70	271	MT2	09/05/90	1.142	0.00 > 100.00	0.00 >	3.70
7404	70	271	MT2	09/05/90	1.142	0.00 > 69.00	0.00 >	0.64
7405	70	272	MT2	09/05/90	1.223	0.00 > 100.00	0.00 >	1.00
7406	70	272	MT2	09/05/90	1.223	0.00 > 100.00	0.00 >	0.50
7407	70	273	MT2	09/05/90	1.194	0.00 > 100.00	0.00 >	2.20
7408	70	273	MT2	09/05/90	1.194	0.00 > 100.00	0.00 >	0.60
7409	70	274	MT2	09/05/90	1.263	0.00 > 100.00	0.00 >	1.13

## CUMULATIVE SUMMARY (cont'd)

AVB No.	Ship- ment	Pit Cell # Line	Test Date	Diff- rential	IC 50	TC 20	SI	TAE
7410	70	274	MT2	09/05/90	1.243	0.00 > 100.00	0.00 >	1.40
7411	70	275	MT2	09/05/90	1.252	0.00 > 100.00	0.00 >	3.39
7412	70	275	MT2	09/05/90	1.252	0.00 > 100.00	0.00 >	2.70
7413	70	276	MT2	09/05/90	1.294	0.00 > 100.00	0.00 >	6.90
7414	70	276	MT2	09/05/90	1.294	0.00 > 100.00	0.00 >	6.19
7415	70	277	MT2	09/05/90	1.222	0.00 > 100.00	0.00 >	3.39
7416	70	277	MT2	09/05/90	1.222	0.00 > 71.50	0.00 >	1.93
7417	70	278	MT2	09/05/90	1.279	0.00 > 49.50	0.00 >	2.21
7418	70	278	MT2	09/05/90	1.279	0.00 > 100.00	0.00 >	2.60
7419	70	279	MT2	09/05/90	1.263	0.00 > 100.00	0.00 >	3.40
7420	70	279	MT2	09/05/90	1.263	0.00 > 66.00	0.00 >	0.70
7421	70	27A	MT2	09/05/90	1.258	0.00 > 73.50	0.00 >	0.60
7422	70	27A	MT2	09/05/90	1.258	0.00 > 15.70	0.00 >	0.10
7423	70	27B	MT2	09/05/90	1.225	0.00 > 100.00	0.00 >	1.60
7424	70	27B	MT2	09/05/90	1.225	0.00 > 100.00	0.00 >	0.20
7425	70	27C	MT2	09/05/90	1.225	0.00 > 100.00	0.00 >	2.00
7426	70	27C	MT2	09/05/90	1.225	0.00 > 122.00	0.00 >	0.94
7427	70	27D	MT2	09/05/90	1.233	0.00 > 100.00	0.00 >	0.00
7428	70	27D	MT2	09/05/90	1.235	0.00 > 49.30	0.00 >	0.00
7429	70	27E	MT2	09/05/90	1.761	0.00 > 53.50	0.00 >	6.47
7430	70	27E	MT2	09/05/90	1.261	0.00 > 100.00	0.00 >	0.38
7431	70	27F	MT2	09/05/90	1.287	0.00 > 100.00	0.00 >	0.12
7432	70	27F	MT2	09/05/90	1.287	0.00 > 100.00	0.00 >	1.25
7433	70	27G	MT2	09/05/90	1.244	0.00 > 20.00	0.00 >	0.10
7434	70	27G	MT2	09/05/90	1.246	0.00 > 100.00	0.00 >	2.70
7435	70	27H	MT2	09/05/90	1.292	0.00 > 100.00	0.00 >	6.10
7436	70	27H	MT2	09/05/90	1.292	0.00 > 100.00	0.00 >	3.10
7437	70	27I	MT2	09/05/90	1.241	0.00 > 100.00	0.00 >	0.20
7447	71	21H	MT2	08/15/90	1.373	0.00 > 6.46	0.00 >	0.63
7448	71	21K	MT2	08/15/90	1.373	0.00 > 27.70	0.00 >	1.64
7449	71	200	MT2	08/15/90	1.364	0.00 > 1.70	0.00 >	0.00
7451	73	2E5	CEM	09/26/90	0.634	0.00 > 0.57	0.00 >	0.00
7451	73	204	MT2	09/26/90	0.739	0.00 > 2.20	0.00 >	0.00
7452	73	2E6	CEM	09/26/90	0.652	0.00 > 6.56	0.00 >	0.75
7452	73	204	MT2	09/26/90	0.750	0.00 > 8.70	0.00 >	1.02
7453	73	2E6	CEM	09/26/90	0.652	0.00 > 53.50	0.00 >	8.84
7453	73	204	MT2	09/26/90	0.750	0.00 > 32.00	0.00 >	1.65
7454	73	2E7	CEM	09/26/90	0.707	0.00 < 0.32	0.00 >	0.00
7454	73	34Z	CEM	11/20/90	1.007	0.00 > 1.47	0.00 >	1.90
7454	73	20L	MT2	09/26/90	0.899	0.00 > 2.37	0.00 >	0.84
7455	73	2E7	CEM	09/26/90	0.707	0.00 > 0.82	0.00 >	0.01
7455	73	20L	MT2	09/26/90	0.899	0.00 > 2.45	0.00 >	1.34
7456	73	2E8	CEM	09/26/90	0.607	0.00 > 96.90	0.00 >	2.16
7456	73	20M	MT2	09/26/90	0.880	0.00 > 16.60	0.00 >	2.30
7457	73	2E8	CEM	09/26/90	0.607	0.00 > 0.18	0.00 >	0.00
7457	73	36Y	CEM	11/20/90	0.903	0.00 > 3.86	0.00 >	1.12
7457	73	20M	MT2	09/26/90	0.880	0.00 > 0.80	0.00 >	0.02
7458	73	2E9	CEM	09/26/90	0.663	0.00 > 2.34	0.00 >	0.00
7458	73	20N	MT2	09/26/90	0.843	0.00 > 3.97	0.00 >	0.00
7459	73	2E9	CEM	09/26/90	0.663	0.00 > 5.07	0.00 >	2.80
7459	73	204	MT2	09/26/90	0.843	0.00 > 5.27	0.00 >	2.93
7460	73	2E4	CEM	09/26/90	0.639	0.00 > 2.40	0.00 >	0.00
7460	73	200	MT2	09/26/90	0.800	0.00 > 3.92	0.00 >	0.13
7461	73	2E4	CEM	09/26/90	0.639	0.00 > 14.40	0.00 >	7.42
7461	73	200	MT2	09/26/90	0.800	0.00 > 13.20	0.00 >	2.57
7462	73	2E8	CEM	09/26/90	0.500	0.00 > 15.60	0.00 >	0.12
7462	73	20P	MT2	09/26/90	0.886	0.00 > 14.00	0.00 >	0.00
7463	73	2E9	CEM	09/26/90	0.500	0.00 > 100.00	0.00 >	12.01
7463	73	20P	MT2	09/26/90	0.888	0.00 > 100.00	0.00 >	0.00
7464	73	2FA	CEM	09/27/90	0.710	0.00 > 62.50	0.00 >	0.00
7464	73	2EP	MT2	09/27/90	1.119	0.00 > 100.00	0.00 >	2.57
7465	73	2FB	CEM	09/27/90	0.797	0.00 > 100.00	0.00 >	0.12
7465	73	2E9	MT2	09/27/90	1.122	0.00 > 100.00	0.00 >	7.90
7466	73	2FB	CEM	09/27/90	0.797	0.00 > 100.00	0.00 >	0.06
7466	73	2E9	MT2	09/27/90	1.122	0.00 > 100.00	0.00 >	6.46
7467	73	2FC	CEM	09/27/90	0.819	0.00 > 64.20	0.00 >	5.29
7467	73	2E9	MT2	09/27/90	0.787	0.00 > 100.00	0.00 >	14.61
7468	73	2FC	CEM	09/27/90	0.819	0.00 > 100.00	0.00 >	7.77
7468	73	2E9	MT2	09/27/90	0.787	0.00 > 88.70	0.00 >	11.88
7469	73	2P0	CEM	09/27/90	0.773	0.00 > 100.00	0.00 >	0.00
7469	73	2E8	MT2	09/27/90	1.056	0.00 > 100.00	0.00 >	3.50
7470	73	2P0	CEM	09/27/90	0.773	0.00 > 28.90	0.00 >	0.40
7470	73	2E8	MT2	09/27/90	1.056	0.00 > 5.84	0.00 >	1.54
7471	73	2P0	CEM	09/27/90	0.720	0.00 > 74.70	0.00 >	5.17
7471	73	2E7	MT2	09/27/90	1.071	0.00 > 50.10	0.00 >	5.00
7472	73	2P0	CEM	09/27/90	0.720	0.00 > 71.50	0.00 >	1.60
7472	73	2E7	MT2	09/27/90	1.071	0.00 > 100.00	0.00 >	2.95
7473	73	2P1	CEM	09/27/90	0.558	0.00 > 100.00	0.00 >	9.50

## Cumulative Summary (cont'd)

AVS	Ship#	PL#	Call	Date	Diff-	IC	SO	TC	25	SI	TAT
No.	ment	#	Line		mtl.						
7473	73	26U	MT2	09/27/90	1.000	0.00	>	100.00		0.00	> 9.81
7474	73	2FF	CEM	09/27/90	0.558	0.00		100.00		0.00	> 6.22
7476	73	26U	MT2	09/27/90	1.000	0.00		67.40		0.00	> 2.49
7475	73	27G	CEM	09/27/90	0.703	0.00		17.90		0.00	> 0.98
7475	73	26V	MT2	09/27/90	1.015	0.00	>	100.00		0.00	> 4.70
7476	73	2FG	CEM	09/27/90	0.703	0.00		71.20		0.00	> 4.73
7476	73	2EV	MT2	09/27/90	1.015	0.00	>	100.00		0.00	> 9.20
7477	73	2FM	CEM	09/27/90	0.822	0.00	>	100.00		0.00	> 0.09
7477	73	2DW	MT2	09/27/90	1.072	0.00	>	100.00		0.00	> 5.78
7478	73	2FH	CEM	09/27/90	0.822	0.00		1.87		0.00	> 0.21
7478	73	2EW	MT2	09/27/90	1.072	0.00	>	100.00		0.00	> 7.00
7479	73	26S	CEM	09/28/90	0.947	0.00		72.80		0.00	> 0.00
7479	73	2FX	MT2	09/28/90	1.098	0.00	>	100.00		0.00	> 0.00
7480	73	269	CEM	09/28/90	0.947	0.00		39.80		0.00	> 0.00
7480	73	2FX	MT2	09/28/90	1.098	0.00	>	100.00		0.00	> 0.53
7481	73	2GA	CEM	09/28/90	1.067	0.00		0.32		0.00	> 0.00
7481	73	2FY	MT2	09/28/90	1.090	0.00		49.30		0.00	> 0.00
7482	73	2GA	CEM	09/28/90	1.067	0.00		0.30		0.00	> 0.00
7482	73	2FY	MT2	09/28/90	1.090	0.00	>	100.00		0.00	> 4.23
7483	73	2GB	CEM	09/28/90	0.821	0.00		0.27		0.00	> 0.22
7483	73	2FZ	MT2	09/28/90	1.100	0.00		49.30		0.00	> 0.00
7484	73	2GB	CEM	09/28/90	0.821	0.00		42.00		0.00	> 0.00
7484	73	2FZ	MT2	09/28/90	1.100	0.00	>	100.00		0.00	> 4.49
7485	73	2GC	CEM	09/28/90	0.909	0.00		32.90		0.00	> 3.00
7485	73	2G0	MT2	09/28/90	1.002	0.00		49.20		0.00	> 0.00
7486	73	2GC	CEM	09/28/90	0.909	0.00		100.00		0.00	> 0.00
7486	73	2G0	MT2	09/28/90	1.002	0.00	>	100.00		0.00	> 1.08
7487	73	2G0	CEM	09/28/90	1.057	0.00		47.50		0.00	> 0.00
7487	73	2G1	MT2	09/28/90	1.045	0.00	>	100.00		0.00	> 0.53
7488	73	2G0	CEM	09/28/90	1.057	0.00		42.50		0.00	> 0.00
7488	73	2G1	MT2	09/28/90	1.045	0.00		62.70		0.00	> 3.00
7489	73	2GE	CEM	09/28/90	0.816	0.00		23.30		0.00	> 0.18
7489	73	2G2	MT2	09/28/90	1.040	0.00		74.50		0.00	> 1.86
7490	73	2GE	CEM	09/28/90	0.816	0.00		0.24		0.00	> 0.00
7490	73	2G2	MT2	09/28/90	1.040	0.00		61.10		0.00	> 0.96
7491	73	2G7	CEM	09/28/90	0.973	0.00		0.31		0.00	> 0.00
7491	73	2G3	MT2	09/28/90	1.090	0.00		11.30		0.00	> 0.00
7492	73	2G4	CEM	09/28/90	0.973	0.00		39.20		0.00	> 0.00
7492	73	2G3	MT2	09/28/90	1.090	0.00	>	100.00		0.00	> 1.12
7493	73	2GG	CEM	09/28/90	0.971	0.00		0.30		0.00	> 0.00
7493	73	2G4	MT2	09/28/90	0.877	0.00		0.39		0.00	> 0.00
7493	73	2G4	MT2	10/26/90	0.818	0.00		6.99		0.00	> 0.03
7494	73	2GG	CEM	09/28/90	0.971	0.00		37.20		0.00	> 0.00
7494	73	2G4	MT2	09/28/90	0.877	0.00	>	100.00		0.00	> 10.80
7495	19A	2G4	CEM	08/29/90	0.841	0.00		2.10		0.00	> 0.00
7495	19A	2G4	CEM	08/29/90	0.841	0.00		39.90		0.00	> 0.03
7497	19A	2G4	CEM	08/29/90	0.667	0.00	>	100.00		0.00	> 6.90
7498	19A	2G6	CEM	08/29/90	0.667	0.00	>	100.00		0.00	> 7.80
7499	19A	2G6	CEM	08/29/90	0.732	0.00	>	100.00		0.00	> 1.61
7500	19A	2G6	CEM	08/29/90	0.752	0.00		45.10		0.00	> 9.33
7501	19A	2G6	CEM	08/29/90	0.737	0.00		21.00		0.00	> 5.71
7502	19A	2G6	CEM	08/29/90	0.737	0.00	>	100.00		0.00	> 0.43
7503	19A	2G6	CEM	08/29/90	0.596	0.00		42.70		0.00	> 0.00
7504	19A	2G6	CEM	08/29/90	0.896	0.00		17.30		0.00	> 0.00
7505	19A	2G6	CEM	08/29/90	0.833	0.00		0.92		0.00	> 0.00
7506	19A	2G6	CEM	08/29/90	0.533	0.00		32.00		0.00	> 0.00
7507	19A	2G6	CEM	08/29/90	0.793	0.00	<	0.32		0.00	> 0.00
7508	19A	2G6	CEM	08/29/90	0.795	0.00		49.70		0.00	> 0.10
7509	19A	2G6	CEM	08/29/90	0.838	0.00		27.60		0.00	> 0.00
7510	19A	2G6	CEM	08/29/90	0.883	0.00	<	0.32		0.00	> 0.00
7511	19A	2G7	CEM	08/29/90	0.778	0.00	<	0.32		0.00	> 0.00
7512	19A	2G7	CEM	08/29/90	0.778	0.00		9.74		0.00	> 0.00
7513	19A	2G6	CEM	08/29/90	0.865	0.00	<	0.32		0.00	> 0.00
7514	19A	2G6	CEM	08/29/90	0.843	0.00		0.32		0.00	> 0.00
7524	19A	27P	CEM	09/06/90	0.925	0.00		21.60		0.00	> 0.00
7527	19A	27P	CEM	09/06/90	0.750	0.00		22.40		0.00	> 0.00
7529	19A	27P	CEM	09/06/90	0.860	0.00		52.90		0.00	> 0.25
7530	19A	27P	CEM	09/06/90	0.860	0.00		28.10		0.00	> 0.00
7533	19A	27T	CEM	09/06/90	0.932	0.00		36.30		0.00	> 0.00
7534	19A	27T	CEM	09/06/90	0.932	0.00		25.70		0.00	> 2.12
7535	19A	27U	CEM	09/06/90	0.896	0.00		7.53		0.00	> 0.01
7534	19A	27U	CEM	09/06/90	0.896	0.00		5.00		0.00	> 0.00
7537	19A	27V	CEM	09/06/90	0.841	0.00		5.65		0.00	> 0.71
7538	19A	27V	CEM	09/06/90	0.841	0.00		1.98		0.00	> 1.39
7539	19A	27W	CEM	09/06/90	0.799	0.00		16.80		0.00	> 0.00
7540	19A	27W	CEM	09/06/90	0.799	0.00		1.50		0.00	> 0.00
7541	19A	27X	CEM	09/06/90	0.766	0.00		2.27		0.00	> 0.00
7542	19A	27X	CEM	09/06/90	0.766	0.00		21.90		0.00	> 0.00

## CUMULATIVE SUMMARY (cont'd)

AVS	Ship-	Pit Cell	Test	Diff-	IC 50	TC 25	SI	TAE
No.	agent	# Line	Date	mtl.				
7545	19A	36P CEM	11/20/90	1.061	0.00	0.54	0.00	> 0.14
7546	19A	36Q CEM	11/20/90	0.806	0.00	0.53	0.00	0.00
7547	19A	36G CEM	11/20/90	0.806	0.00	3.92	0.00	0.00
7548	19A	36R CEM	11/20/90	1.094	0.00	1.30	0.00	0.00
7549	19A	26K CEM	08/29/90	0.623	0.00	0.30	0.00	0.46
7549	19A	36R CEM	11/20/90	1.094	0.00	> 100.00	0.00	1.33
7550	19A	24R MT2	08/23/90	1.181	0.00	> 100.00	0.00	> 7.39
7550	19A	26K CEM	08/29/90	0.623	0.00	25.30	0.00	0.00
7550	19A	36S CEM	11/20/90	0.876	0.00	44.80	0.00	> 3.57
7550	19A	24R MT2	08/23/90	1.181	0.00	49.00	0.00	0.96
7551	19A	36S CEM	11/20/90	0.876	0.00	> 100.00	0.00	> 3.01
7552	19A	36I CEM	11/20/90	1.072	0.00	> 100.00	0.00	0.00
7553	19A	36T CEM	11/20/90	1.072	0.00	4.95	0.00	> 0.03
7554	19A	36U CEM	11/20/90	0.926	0.00	> 100.00	0.00	> 1.84
7555	19A	36U CEM	11/20/90	0.926	0.00	> 100.00	0.00	> 6.51
7556	19A	34V CEM	11/20/90	1.077	0.00	> 100.00	0.00	> 0.03
7557	19A	34V CEM	11/20/90	1.077	0.00	60.30	0.00	0.00
7558	19A	36W CEM	11/20/90	1.008	0.00	> 100.00	0.00	1.80
7559	19A	36W CEM	11/20/90	1.008	0.00	> 100.00	0.00	> 3.10
7560	19A	36X CEM	11/20/90	0.896	0.00	> 100.00	0.00	1.43
7566	20A	205 CEM	10/02/90	0.649	0.00	> 100.00	0.00	0.00
7566	20A	26L MT2	10/02/90	0.712	0.00	> 100.00	0.00	> 31.02
7567	20A	265 CEM	10/02/90	0.649	0.00	> 100.00	0.00	0.52
7567	20A	26L MT2	10/02/90	0.712	4.80	> 100.00	2.14	> 31.58
7568	20A	246 CEM	10/02/90	0.708	0.00	> 100.00	0.00	> 1.73
7568	20A	26M MT2	10/02/90	0.714	62.90	> 100.00	1.59	> 26.58
7569	20A	349 MT2	11/20/90	0.819	0.00	767.00	0.00	> 19.62
7569	20A	246 CEM	10/02/90	0.708	0.00	> 100.00	0.00	> 2.40
7569	20A	26M MT2	10/02/90	0.714	56.60	> 100.00	1.77	> 18.28
7569	20A	36A MT2	11/20/90	0.921	0.00	556.00	0.00	> 20.40
7570	20A	247 CEM	10/02/90	0.654	0.00	> 100.00	0.00	0.46
7570	20A	26M MT2	10/02/90	0.643	31.70	> 100.00	3.15	> 26.00
7571	20A	247 CEM	10/02/90	0.654	0.00	> 100.00	0.00	0.95
7571	20A	26M MT2	10/02/90	0.643	0.00	74.80	0.00	> 20.65
7572	20A	248 CEM	10/02/90	0.665	0.00	66.00	0.00	0.00
7572	20A	26G MT2	10/02/90	0.605	0.00	> 100.00	0.00	6.56
7573	20A	248 CEM	10/02/90	0.665	0.00	> 100.00	0.00	0.00
7573	20A	263 MT2	10/02/90	0.605	0.00	> 100.00	0.00	> 24.12
7574	20A	249 CEM	10/02/90	0.571	0.00	> 100.00	0.00	> 1.50
7574	20A	26P MT2	10/02/90	0.693	0.00	< 0.32	0.00	> 0.15
7575	20A	249 CEM	10/02/90	0.571	0.00	> 100.00	0.00	> 5.14
7575	20A	26P MT2	10/02/90	0.693	0.00	> 100.00	0.00	> 19.48
7576	20A	24A CEM	10/02/90	0.687	0.00	> 100.00	0.00	> 1.53
7576	20A	26B MT2	10/02/90	0.718	0.00	< 0.32	0.00	0.00
7577	20A	24A CEM	10/02/90	0.687	0.00	2.27	0.00	> 0.31
7577	20A	26B MT2	10/02/90	0.718	0.00	0.36	0.00	0.00
7578	20A	24B CEM	10/02/90	0.665	0.00	9.06	0.00	> 1.70
7578	20A	26R MT2	10/02/90	0.745	0.00	4.27	0.00	> 8.52
7579	20A	24B CEM	10/02/90	0.665	0.00	12.60	0.00	> 2.86
7579	20A	26R MT2	10/02/90	0.745	0.00	5.09	0.00	> 6.64
7580	20A	24C CEM	10/02/90	0.738	0.00	77.50	0.00	0.00
7580	20A	26S MT2	10/02/90	0.727	0.00	> 100.00	0.00	> 7.87
7581	20A	24C CEM	10/02/90	0.738	0.00	> 100.00	0.00	0.03
7581	20A	26S MT2	10/02/90	0.727	100.00	> 100.00	1.00	> 17.90
7582	20A	24D CEM	10/02/90	0.652	0.00	> 100.00	0.00	> 5.30
7582	20A	26T MT2	10/02/90	0.726	0.00	> 100.00	0.00	> 21.99
7583	20A	24D CEM	10/02/90	0.652	0.00	> 100.00	0.00	0.48
7583	20A	26T MT2	10/02/90	0.726	0.00	> 100.00	0.00	> 14.93
7584	20A	24E CEM	10/02/90	0.656	0.00	> 100.00	0.00	0.00
7584	20A	26U MT2	10/02/90	0.631	0.00	> 100.00	0.00	> 8.71
7585	20A	24E CEM	10/02/90	0.656	0.00	> 100.00	0.00	> 2.30
7585	20A	26U MT2	10/02/90	0.631	0.00	> 100.00	0.00	> 11.30
7586	20A	24F CEM	10/02/90	0.575	0.00	76.20	0.00	0.00
7586	20A	36A MT2	11/20/90	0.921	0.00	> 100.00	0.00	> 9.12
7586	20A	4CY MT2	02/21/91	1.654	0.00	> 100.00	0.00	0.00
7587	20A	24F CEM	10/02/90	0.575	0.00	> 100.00	0.00	> 3.89
7587	20A	36B MT2	11/20/90	0.939	0.00	> 100.00	0.00	> 18.50
7587	20A	4CY MT2	02/21/91	1.654	0.00	443.00	0.00	0.00
7588	20A	24G CEM	10/02/90	0.595	0.00	> 100.00	0.00	0.00
7588	20A	26M MT2	10/02/90	0.691	0.00	> 100.00	0.00	> 37.52
7589	20A	24G CEM	10/02/90	0.595	0.00	60.50	0.00	0.96
7589	20A	26M MT2	10/02/90	0.691	9.18	> 100.00	10.59	> 40.68
7589	20A	36B MT2	11/20/90	0.939	0.00	215.00	0.00	> 10.52
7590	20A	24H CEM	10/02/90	0.640	0.00	> 100.00	0.00	> 10.76
7590	20A	26M MT2	10/02/90	0.619	29.20	> 100.00	3.43	> 31.31
7590	20A	36C MT2	11/20/90	0.836	0.00	> 100.00	0.00	> 9.10
7591	20A	24H CEM	10/02/90	0.640	0.00	> 100.00	0.00	0.94
7591	20A	26M MT2	10/02/90	0.619	0.00	72.30	0.00	> 16.23

## CUMULATIVE SUMMARY (cont'd)

AV#	Ship:	Pit Cell	Test Date	Diffr. Pmt.	TC 50	TC 25	\$1	TAT
Do.	ment	# Line						
7592	20A	27I CEM	10/02/90	0.635	0.00 > 100.00	0.00 >	0.94	
7592	20A	26Y MT2	10/02/90	0.617	6.99 > 100.00 >	14.31 >	44.28	
7592	20A	36C MT2	11/20/90	0.636	0.00 > 538.00	0.00	5.63	
7593	20A	2N1 CEM	10/02/90	0.635	0.00 > 100.00	0.00	0.22	
7593	20A	26Y MT2	10/02/90	0.617	15.50 > 100.00 >	6.43 >	44.00	
7593	20A	36D MT2	11/20/90	0.603	< 0.32 < 0.32 -	1.00	0.00	
7594	20A	2N1 CEM	10/02/90	0.631	0.00 > 100.00	0.00 >	21.84	
7595	20A	26Z MT2	10/02/90	0.634	0.00 > 100.00	0.00 >	17.58	
7595	20A	2KJ CEM	10/02/90	0.631	0.00 > 57.80	0.00 >	4.31	
7595	20A	26Z MT2	10/02/90	0.634	0.00 > 21.00	0.00 >	14.00	
7596	20A	2KX CEM	10/02/90	0.626	0.00 > 15.70	0.00	3.79	
7596	20A	2KX MT2	10/02/90	0.698	0.00 > 9.22	0.00 >	13.13	
7597	20A	2PK CEM	10/02/90	0.626	0.00 > 35.70	0.00	0.35	
7597	20A	2KX MT2	10/02/90	0.698	0.00 > 57.40	0.00 >	29.77	
7598	20A	2KX CEM	10/02/90	0.624	0.00 > 39.60	0.00 >	5.04	
7598	20A	2K1 MT2	10/02/90	0.632	0.00 > 43.50	0.00	12.42	
7599	20A	2KX CEM	10/02/90	0.624	0.00 > 79.90	0.00 >	5.89	
7599	20A	2K1 MT2	10/02/90	0.632	0.00 > 100.00	0.00 >	29.34	
7600	20A	2MM CEM	10/02/90	0.658	0.00 > 6.22	0.00 >	4.36	
7600	20A	2K2 MT2	10/02/90	0.706	0.00 > 100.00	0.00 >	34.42	
7601	20A	2MM CEM	10/02/90	0.658	0.00 > 45.30	0.00 >	4.50	
7601	20A	2K2 MT2	10/02/90	0.706	18.30 > 100.00 >	5.44 >	37.15	
7602	20A	2MM CEM	10/02/90	0.644	0.00 > 63.40	0.00	0.00	
7602	20A	2K3 MT2	10/02/90	0.682	0.00 < 0.32	0.00	0.77	
7603	20A	2MM CEM	10/02/90	0.644	0.00 > 100.00	0.00 >	10.28	
7603	20A	2K3 MT2	10/02/90	0.682	0.00 > 100.00	0.00 >	16.70	
7604	20A	2L2 CEM	10/03/90	0.518	0.00 > 32.00	0.00	0.00	
7604	20A	2U5 MT2	10/23/90	0.956	28.30 > 50.70	1.79	7.79	
7605	20A	2LK CEM	10/03/90	0.400	0.00 > 54.10	0.00	0.00	
7605	20A	2K6 MT2	10/23/90	1.004	24.30 > 100.00 >	4.11 >	29.58	
7605	20A	36C MT2	11/20/90	0.865	0.00 > 2.86	0.00	1.04	
7606	20A	2LK CEM	10/03/90	0.400	0.00 > 100.00	0.00 >	5.38	
7606	20A	2K6 MT2	10/23/90	1.004	0.00 > 100.00	0.00 >	7.89	
7607	20A	2U7 MT2	10/23/90	0.972	0.00 > 100.00	0.00 >	4.48	
7608	20A	2IL CEM	10/03/90	0.481	0.00 > 100.00	0.00	1.20	
7608	20A	2U7 MT2	10/23/90	0.972	0.00 > 100.00	0.00 >	2.33	
7609	20A	21W CEM	10/03/90	0.435	0.00 > 100.00	0.00	0.00	
7609	20A	2U8 MT2	10/23/90	1.041	0.00 > 100.00	0.00 >	1.54	
7610	20A	21W CEM	10/03/90	0.432	0.00 > 10.30	0.00 >	2.11	
7610	20A	2U8 MT2	10/23/90	1.041	0.00 > 16.70	0.00 >	1.53	
7611	20A	21W CEM	10/03/90	0.470	0.00 > 52.50	0.00 >	0.34	
7611	20A	2U9 MT2	10/23/90	0.984	0.00 > 70.90	0.00	11.64	
7612	20A	21W CEM	10/03/90	0.470	0.00 > 4.63	0.00 >	1.72	
7612	20A	2U9 MT2	10/23/90	0.984	0.00 > 17.90	0.00	0.89	
7613	20A	21O CEM	10/03/90	0.457	0.00 > 100.00	0.00	0.12	
7613	20A	2U8 MT2	10/23/90	0.957	0.00 > 100.00	0.00 >	2.69	
7614	20A	21O CEM	10/03/90	0.457	0.00 > 100.00	0.00	0.00	
7614	20A	2U8 MT2	10/23/90	0.957	0.00 > 100.00	0.00	2.77	
7615	20A	21P CEM	10/03/90	0.441	0.00 > 8.35	0.00	0.00	
7615	20A	2U8 MT2	10/23/90	1.020	0.00 > 5.03	0.00 >	3.57	
7616	20A	21P CEM	10/03/90	0.441	0.00 > 5.09	0.00	0.00	
7616	20A	2U8 MT2	10/23/90	1.020	0.00 > 5.44	0.00	2.58	
7617	20A	21Q CEM	10/03/90	0.364	0.00 > 100.00	0.00	0.00	
7617	20A	2U8 MT2	10/23/90	1.029	0.00 > 100.00	0.00 >	4.59	
7618	20A	21Q CEM	10/03/90	0.364	0.00 > 100.00	0.00	0.63	
7618	20A	2U8 MT2	10/23/90	1.029	0.00 > 52.70	0.00	5.88	
7619	20A	21R CEM	10/03/90	0.513	0.00 > 25.20	0.00 >	1.93	
7619	20A	2U8 MT2	10/23/90	0.923	0.00 > 45.50	0.00 >	7.19	
7620	20A	21R CEM	10/03/90	0.513	26.20 > 2.83	0.11 >	15.90	
7620	20A	2U8 MT2	10/23/90	0.923	0.00 > 100.00	0.00	4.92	
7621	20A	21S CEM	10/03/90	0.358	0.00 > 100.00	0.00	0.00	
7621	20A	2U8 MT2	10/23/90	1.031	0.00 > 100.00	0.00	2.23	
7622	20A	21S CEM	10/03/90	0.358	0.00 > 100.00	0.00 >	0.10	
7622	20A	2U8 MT2	10/23/90	1.031	0.00 > 100.00	0.00	0.00	
7623	20A	21T CEM	10/03/90	0.397	0.00 > 100.00	0.00 >	3.60	
7623	20A	2U8 MT2	10/23/90	1.004	0.00 > 100.00	0.00	0.46	
7624	20A	21T CEM	10/03/90	0.397	0.00 > 100.00	0.00 >	3.93	
7624	20A	2U8 MT2	10/23/90	1.004	0.00 > 21.30	0.00	0.60	
7625	20A	21U CEM	10/03/90	0.389	0.00 > 100.00	0.00 >	1.70	
7625	20A	2U8 MT2	10/23/90	0.968	0.00 > 100.00	0.00 >	4.32	
7626	20A	21U CEM	10/03/90	0.389	0.00 > 100.00	0.00 >	1.54	
7626	20A	2U8 MT2	10/23/90	0.968	0.00 > 100.00	0.00 >	1.22	
7627	20A	21V CEM	10/03/90	0.491	0.00 > 100.00	0.00 >	2.85	
7627	20A	2U8 MT2	10/23/90	0.975	0.00 > 83.50	0.00 >	3.33	
7628	20A	21V CEM	10/03/90	0.491	0.00 > 100.00	0.00 >	8.62	
7628	20A	2U8 MT2	10/23/90	0.975	0.00 > 100.00	0.00 >	1.24	
7629	20A	21X MT2	10/04/90	0.832	0.00 > 3.63	0.00	0.0	
7630	20A	21X MT2	10/04/90	0.832	0.00 > 100.00	0.00 >	3.69	

## Cumulative summary (cont'd)

AVB	Ship- No.	Plt Cell # Line	Test Date	Differ- mtl.	TC 50	TC 25	SI	TAI
7631	20A	21Y MT2	10/04/90	0.869	0.00	77.30	0.00	1.12
7632	20A	21Y MT2	10/04/90	0.849	0.00	0.57	0.00	0.00
7633	20A	21Z MT2	10/04/90	0.796	0.00	1.30	0.00	0.50
7634	20A	21Z MT2	10/04/90	0.796	0.00	1.03	0.00	0.20
7635	20A	220 MT2	10/04/90	0.855	0.00	1.52	0.00	1.30
7636	20A	220 MT2	10/04/90	0.855	0.00	1.18	0.00	0.00
7637	20A	221 MT2	10/04/90	0.670	0.00	4.92	0.00	0.00
7638	20A	221 MT2	10/04/90	0.670	0.00	100.00	0.00	0.00
7639	20A	222 MT2	10/04/90	0.737	0.00	2.00	0.00	0.00
7640	20A	222 MT2	10/04/90	0.737	0.00	0.73	0.00	0.00
7641	20A	223 MT2	10/04/90	0.684	0.00	0.57	0.00	0.26
7642	20A	223 MT2	10/04/90	0.684	0.00	1.33	0.00	0.00
7643	20A	224 MT2	10/04/90	0.818	0.00	13.50	0.00	7.59
7644	20A	224 MT2	10/04/90	0.818	0.00	1.31	0.00	0.37
7645	20A	225 MT2	10/04/90	0.757	0.00	15.60	0.00	0.00
7646	20A	225 MT2	10/04/90	0.757	0.00	100.00	0.00	4.46
7647	20A	226 MT2	10/04/90	0.585	0.00	13.70	0.00	1.69
7648	20A	226 MT2	10/04/90	0.585	0.00	100.00	0.00	3.31
7649	20A	227 MT2	10/04/90	0.556	0.00	100.00	0.00	18.42
7650	20A	227 MT2	10/04/90	0.556	0.00	100.00	0.00	6.98
7651	20A	228 MT2	10/04/90	0.719	0.00	17.30	0.00	0.18
7652	20A	228 MT2	10/04/90	0.719	0.00	100.00	0.00	0.09
7653	20A	229 MT2	10/04/90	0.698	0.00	100.00	0.00	8.59
7654	20A	229 MT2	10/04/90	0.698	0.00	100.00	0.00	4.90
7655	20A	230 MT2	10/04/90	0.774	0.00	100.00	0.00	13.20
7656	20A	230 MT2	10/04/90	0.774	0.00	100.00	0.00	11.52
7657	20A	230 MT2	10/04/90	0.456	0.00	100.00	0.00	6.15
7658	20A	230 MT2	10/04/90	0.456	0.00	100.00	0.00	1.45
7659	20A	230C CEM	10/04/90	0.547	0.00	100.00	0.00	15.61
7660	20A	230C CEM	10/04/90	0.543	0.00	100.00	0.00	8.64
7661	20A	230 MT2	10/04/90	0.489	0.00	100.00	0.00	15.70
7662	20A	230 MT2	10/04/90	0.489	0.00	100.00	0.00	0.00
7663	20A	230E MT2	10/04/90	3.607	0.00	100.00	0.00	33.31
7663	20A	360 MT2	10/20/90	0.833	3.20	< 3.20	1.00	0.00
7666	20A	230E MT2	10/04/90	0.607	0.00	100.00	0.00	19.03
7665	20A	230F MT2	10/04/90	0.660	0.00	0.78	0.00	0.00
7666	20A	230F MT2	10/04/90	0.460	0.00	3.64	0.00	1.97
7667	20A	230L CEM	10/05/90	0.748	0.00	4.06	0.00	0.54
7667	20A	231 MT2	10/23/90	0.987	0.00	12.20	0.00	8.71
7668	20A	231 CEM	10/05/90	0.748	0.00	30.40	0.00	0.00
7668	20A	231 MT2	10/23/90	0.987	0.00	> 100.00	0.00	1.32
7669	20A	230L CEM	10/05/90	0.821	0.00	2.41	0.00	0.00
7669	20A	231X12	10/23/90	1.037	0.00	2.32	0.00	0.37
7670	20A	230L CEM	10/05/90	0.821	0.00	3.20	0.00	0.00
7670	20A	231X12	10/23/90	1.037	0.00	13.20	0.00	12.09
7671	20A	230L CEM	10/05/90	0.743	0.00	0.75	0.00	0.00
7671	20A	231L MT2	10/23/90	1.015	0.00	3.12	0.00	0.00
7672	20A	230L CEM	10/05/90	0.743	0.00	82.70	0.00	3.89
7672	20A	231L MT2	10/23/90	1.015	0.00	> 100.00	0.00	6.55
7673	20A	230L CEM	10/05/90	0.677	0.00	9.15	0.00	0.72
7673	20A	231W MT2	10/23/90	1.044	0.00	> 100.00	0.00	20.50
7674	20A	230L CEM	10/05/90	0.677	0.00	11.30	0.00	0.00
7674	20A	231W MT2	10/23/90	1.044	0.00	15.50	0.00	0.57
7675	20A	230L CEM	10/05/90	0.714	0.00	36.90	0.00	0.00
7675	20A	231W MT2	10/23/90	0.918	0.00	18.10	0.00	8.23
7676	20A	230L CEM	10/05/90	0.714	0.00	4.20	0.00	0.00
7676	20A	231W MT2	10/23/90	0.918	7.39	15.60	2.11	9.70
7677	20A	230L CEM	10/05/90	0.725	0.00	43.50	0.00	0.25
7677	20A	231W MT2	10/23/90	0.989	0.00	71.50	0.00	14.50
7678	20A	230L CEM	10/05/90	0.725	0.00	6.88	0.00	0.00
7678	20A	230L MT2	10/23/90	0.989	0.00	56.30	0.00	6.03
7679	20A	230L CEM	10/05/90	0.712	0.00	100.00	0.00	0.05
7679	20A	230P MT2	10/23/90	0.941	0.00	> 100.00	0.00	8.50
7680	20A	230L CEM	10/05/90	0.712	0.00	14.20	0.00	2.44
7680	20A	230P MT2	10/23/90	0.941	4.82	15.90	3.29	18.73
7681	20A	230S CEM	10/05/90	0.705	0.00	23.50	0.00	0.00
7681	20A	230T MT2	10/23/90	0.989	37.10	> 100.00	2.70	24.84
7682	20A	230S CEM	10/05/90	0.705	0.00	39.30	0.00	0.00
7682	20A	230T MT2	10/23/90	0.989	0.00	43.50	0.00	12.19
7683	20A	230T CEM	10/05/90	0.702	0.00	4.27	0.00	0.00
7684	20A	230T CEM	10/05/90	0.702	0.00	1.44	0.00	0.00
7685	20A	230U CEM	10/05/90	0.730	0.00	1.58	0.00	0.00
7686	20A	230U CEM	10/05/90	0.730	0.00	0.77	0.00	0.00
7687	20A	230V CEM	10/05/90	0.760	0.00	47.00	0.00	4.54
7688	20A	230V CEM	10/05/90	0.760	0.00	40.80	0.00	5.08
7689	20A	230W CEM	10/05/90	0.677	0.00	> 100.00	0.00	0.73
7690	20A	230W MT2	10/23/90	1.018	0.00	> 100.00	0.00	10.69
7690	20A	230Z CEM	10/05/90	0.677	0.00	42.00	0.00	0.00

## CUMULATIVE SUMMARY (cont'd)

AVS	SHIP- No.	PLT Cell # Line	Test Date	Diff- mtl.	IC 50	TC 25	SI	TAI
7690	20A	ZTR MT2	10/23/90	1.018	0.00	49.20	0.00	> 11.69
7691	20A	ZDX CEM	10/05/90	0.701	0.00	> 100.00	0.00	3.31
7691	20A	ZTS MT2	10/23/90	1.036	0.00	> 100.00	0.00	> 0.36
7692	20A	ZDX CEM	10/05/90	0.701	0.00	16.70	0.00	> 6.61
7692	20A	ZTS MT2	10/23/90	1.036	0.00	21.00	0.00	3.01
7693	20A	ZCY CEM	10/05/90	0.560	0.00	32.00	0.00	> 3.67
7693	20A	ZTU MT2	10/23/90	0.960	16.80	47.40	2.83	> 21.88
7694	20A	ZCY CEM	10/05/90	0.560	0.00	42.30	0.00	> 4.51
7694	20A	ZTU MT2	10/23/90	0.940	0.00	49.20	0.00	> 6.88
7695	20A	ZDZ CEM	10/05/90	0.707	0.00	60.60	0.00	0.00
7696	20A	ZDZ CEM	10/05/90	0.707	0.00	> 100.00	0.00	0.00
7697	20A	ZLO CEM	10/05/90	0.565	0.00	> 100.00	0.00	3.04
7698	20A	ZLO CEM	10/05/90	0.565	0.00	42.00	0.00	0.00
7699	20A	ZL1 CEM	10/05/90	0.680	0.00	59.20	0.00	> 2.78
7700	20A	ZL1 CEM	10/05/90	0.680	0.00	36.40	0.00	> 2.86
7701	20A	ZL2 CEM	10/05/90	0.695	13.90	0.23	0.02	> 25.39
7701	20A	ZTU MT2	10/23/90	0.957	14.10	45.90	3.21	> 27.07
7702	20A	ZL2 CEM	10/05/90	0.695	0.00	75.70	0.00	> 5.31
7702	20A	ZTU MT2	10/23/90	0.957	0.00	51.80	0.00	0.91
7703	20A	ZL3 CEM	10/05/90	0.702	0.00	16.80	0.00	> 3.44
7703	20A	ZTY MT2	10/23/90	0.991	0.00	57.40	0.00	> 4.05
7704	20A	ZL3 CEM	10/05/90	0.702	0.00	0.82	0.00	0.00
7704	20A	ZTY MT2	10/23/90	0.991	0.00	1.38	0.00	> 0.35
7705	20A	ZV0 CEM	10/30/90	1.021	0.00	0.72	0.00	0.00
7705	20A	ZLP MT2	10/09/90	0.845	0.00	< 0.32	0.00	0.00
7706	20A	ZV0 CEM	10/30/90	1.021	0.00	1.76	0.00	0.00
7706	20A	ZLP MT2	10/09/90	0.845	0.00	15.50	0.00	> 3.88
7707	20A	ZVC CEM	10/30/90	0.902	0.00	10.60	0.00	0.05
7707	20A	ZLG MT2	10/09/90	0.886	0.00	2.98	0.00	> 7.03
7708	20A	ZVC CEM	10/30/90	0.902	0.00	16.90	0.00	3.60
7708	20A	ZLG MT2	10/09/90	0.886	5.90	14.80	2.51	> 12.42
7708	20A	ZV1 MT2	10/26/90	0.802	7.62	15.50	2.93	> 15.76
7708	20A	ZUJ MT2	11/20/90	0.865	0.00	15.50	0.00	> 5.00
7709	20A	ZV0 CEM	10/30/90	1.053	0.00	4.50	0.00	0.49
7709	20A	ZLR MT2	10/09/90	0.744	0.00	4.90	0.00	> 9.55
7710	20A	ZV0 CEM	10/30/90	1.053	0.00	2.15	0.00	> 0.09
7710	20A	ZLR MT2	10/09/90	0.744	0.00	4.92	0.00	> 8.10
7711	20A	ZVE CEM	10/30/90	0.919	0.00	1.46	0.00	0.00
7711	20A	ZL8 MT2	10/09/90	0.491	0.00	5.15	0.00	> 7.28
7712	20A	ZVE CEM	10/30/90	0.919	0.00	0.39	0.00	0.00
7712	20A	ZL8 MT2	10/09/90	0.499	0.00	0.83	0.00	0.00
7713	20A	ZVF CEM	10/30/90	0.765	0.00	< 0.32	0.00	0.00
7713	20A	Z5W CEM	11/14/90	0.788	0.00	0.01	0.00	0.00
7713	20A	ZLT MT2	10/09/90	0.596	0.00	< 0.32	0.00	0.00
7713	20A	ZV1 MT2	10/26/90	0.802	0.00	0.32	0.00	0.00
7713	20A	ZV2 MT2	10/26/90	0.802	0.00	0.32	0.00	0.00
7715	20A	ZVG CEM	10/30/90	3.981	0.00	< 0.32	0.00	0.00
7715	20A	Z5X CEM	11/14/90	0.742	0.00	0.02	0.00	0.00
7715	20A	ZLU MT2	10/09/90	0.587	0.00	< 0.32	0.00	0.00
7715	20A	ZV2 MT2	10/26/90	0.922	0.00	0.01	0.00	> 0.07
7716	20A	ZVG CEM	10/30/90	0.981	0.00	< 0.32	0.00	0.00
7716	20A	Z5X CEM	11/14/90	0.742	0.00	0.01	0.00	0.00
7716	20A	ZLU MT2	10/09/90	0.587	0.00	< 0.32	0.00	0.00
7716	20A	ZV3 MT2	10/26/90	0.914	0.00	0.01	0.00	0.00
7717	20A	ZVH CEM	10/30/90	1.023	0.00	< 0.32	0.00	0.00
7717	20A	Z5Y CEM	11/14/90	0.783	0.00	0.00	0.00	0.00
7717	20A	ZLY MT2	10/09/90	0.646	0.00	< 0.32	0.00	0.00
7717	20A	ZV3 MT2	10/26/90	0.914	0.00	0.01	0.00	0.76
7718	20A	ZVH CEM	10/30/90	1.423	0.00	2.72	0.00	0.00
7718	20A	ZV4 MT2	10/26/90	0.835	0.00	10.00	0.00	1.43
7718	20A	Z4K MT2	11/20/90	0.840	0.00	6.53	0.00	> 2.76
7719	20A	ZV1 CEM	10/30/90	0.764	0.00	0.72	0.00	0.00
7719	20A	ZLW MT2	10/09/90	0.697	0.00	4.80	0.00	6.43
7720	20A	ZV1 CEM	10/30/90	0.984	0.00	< 0.32	0.00	0.00
7720	20A	Z5Y CEM	11/14/90	0.783	0.00	0.01	0.00	0.00
7720	20A	ZLW MT2	10/09/90	0.697	0.00	< 0.32	0.00	0.00
7720	20A	ZV4 MT2	10/26/90	0.835	0.00	0.01	0.00	0.00
7721	20A	ZV3 CEM	10/30/90	1.044	0.00	< 0.32	0.00	0.00
7721	20A	Z5Z CEM	11/14/90	0.791	0.00	0.22	0.00	0.00
7721	20A	ZLX MT2	10/09/90	0.759	0.00	< 0.32	0.00	0.00
7721	20A	ZV3 MT2	10/26/90	0.774	0.00	0.02	0.00	0.00
7722	20A	ZV3 CEM	10/30/90	1.064	0.00	0.08	0.00	0.00
7722	20A	ZLX MT2	10/09/90	0.759	7.69	15.30	1.99	> 13.44
7723	20A	ZV0 CEM	10/30/90	0.939	0.00	< 0.32	0.00	0.00
7723	20A	Z5Z CEM	11/14/90	0.791	0.00	0.04	0.00	0.00

## Cumulative Summary (cont'd)

AVE	Ship-	Pit Cell	Test	Diff.		TC 50	TC 25	S1	TAT
W.	ment	# Line	Date	mlL.					
7723	20A	2LY MT2	10/09/90	0.768	0.00	<	0.32	0.00	0.00
7723	20A	2V5 MT2	10/26/90	0.774	0.00		0.18	0.00	0.00
7724	20A	2V6 CEM	10/30/90	0.939	0.00	<	0.32	0.00	0.00
7724	20A	360 CEM	11/14/90	0.757	0.00		0.15	0.00	0.00
7724	20A	2LY MT2	10/29/90	0.768	0.00		0.51	0.30	> 0.30
7724	20A	2V6 MT2	10/26/90	0.822	0.00		0.51	0.00	7.21
7725	20A	2VL CEM	10/30/90	1.368	0.00	<	0.32	0.00	0.00
7725	20A	360 CEM	11/14/90	0.757	0.00		0.02	0.00	0.00
7725	20A	2LZ MT2	10/09/90	0.716	0.00	<	0.32	0.00	0.00
7725	20A	2V6 MT2	10/26/90	0.822	0.00		0.07	0.00	7.09
7726	20A	2YL CEM	10/30/90	1.368	0.00	<	0.32	0.00	0.00
7726	20A	361 CEM	11/14/90	0.664	0.00		0.01	0.00	> 0.03
7726	20A	2LZ MT2	10/26/90	0.716	0.00	<	0.32	0.00	0.00
7726	20A	2V7 MT2	10/26/90	0.597	0.00		0.19	0.00	7.67
7727	20A	2YM CEM	10/30/90	0.963	0.00	<	0.32	0.00	0.00
7727	20A	361 CEM	11/14/90	0.664	0.00		0.05	0.00	0.00
7727	20A	2M0 MT2	10/09/90	0.920	0.00		0.32	0.00	0.00
7727	20A	2V7 MT2	10/26/90	0.897	0.00		0.44	0.00	0.00
7728	20A	2VM CEM	10/30/90	0.943	0.00		3.70	0.00	> 1.21
7728	20A	2M0 MT2	10/09/90	0.920	0.00		4.92	0.00	0.00
7729	20A	2VM CEM	10/30/90	0.967	0.00		20.50	0.00	> 0.53
7729	20A	2M1 MT2	10/09/90	0.824	0.00		22.86	0.00	0.00
7730	20A	2VM CEM	10/30/90	0.967	0.00		3.77	0.00	> 0.40
7730	20A	2M1 MT2	10/09/90	0.824	0.00		1.57	0.00	0.00
7731	20A	2M0 CEM	10/30/90	0.929	0.00		4.29	0.00	> 0.18
7731	20A	2M2 MT2	10/09/90	0.670	0.00		3.46	0.00	0.00
7732	20A	2M0 CEM	10/30/90	0.929	0.00		66.00	0.00	> 0.81
7732	20A	2M2 MT2	10/09/90	0.670	72.23	>	106.00	>	1.38 > 3.92
7733	20A	2VP CEM	10/30/90	0.935	0.00		22.40	0.00	0.30
7733	20A	2M3 MT2	10/09/90	0.672	0.00		14.80	0.00	0.00
7734	20A	2VP CEM	10/30/90	0.935	0.00		37.00	0.00	3.26
7734	20A	2M3 MT2	10/09/90	0.672	9.55		42.70	4.47	11.87
7735	20A	2V9 CEM	10/30/90	0.921	0.00	>	100.00	0.00	0.00
7735	20A	2M4 MT2	10/09/90	0.748	0.00	>	100.00	0.00	0.96
7736	20A	2M0 CEM	10/30/90	0.921	0.00	>	100.00	0.00	0.00
7736	20A	2M4 MT2	10/09/90	0.748	0.00	>	100.00	0.00	> 0.40
7737	20A	2M8 CEM	10/30/90	0.898	0.00		18.50	0.00	0.00
7737	20A	2M5 MT2	10/09/90	0.742	0.00		15.70	0.00	> 4.73
7738	20A	2M8 CEM	10/30/90	0.898	0.00		1.56	0.00	0.00
7738	20A	2M5 MT2	10/09/90	0.742	0.00		2.31	0.00	> 3.68
7739	20A	2V3 CEM	10/30/90	1.003	0.00		0.48	0.00	> 0.66
7739	20A	362 CEM	11/14/90	0.798	0.00		0.03	0.00	> 0.07
7739	20A	2M6 MT2	10/09/90	0.720	0.00		0.46	0.00	0.00
7739	20A	2V3 MT2	10/26/90	0.863	0.01		0.03	0.00	0.00
7740	20A	2V3 CEM	10/30/90	1.503	0.00		15.50	0.00	> 8.16
7740	20A	2M6 MT2	10/09/90	0.720	54.70	>	100.00	>	1.55 > 7.34
7741	20A	2V7 CEM	10/30/90	1.000	0.00		6.51	0.00	> 6.67
7741	20A	2M7 MT2	10/09/90	0.665	13.50		54.40	4.03	23.41
7741	20A	2V8 MT2	10/26/90	0.863	7.96		25.70	3.23	19.41
7742	20A	2V7 CEM	10/30/90	1.000	0.00		69.80	0.00	> 7.17
7742	20A	2M7 MT2	10/09/90	0.665	59.40	>	100.00	>	1.68 > 11.33
7743	20A	2VU CEM	10/30/90	0.779	0.00		0.04	0.00	1.25
7743	20A	2M7 MT2	10/10/90	1.373	0.00	<	0.32	0.00	0.00
7743	20A	2V7 MT2	10/26/90	0.801	0.00		0.02	0.00	> 0.83
7743	20A	361 MT2	11/20/90	0.808	0.00		0.02	0.00	> 1.33
7744	20A	2M0 CEM	10/30/90	0.779	0.00		0.57	0.00	> 0.97
7744	20A	2M0 MT2	10/10/90	1.101	0.00	<	0.32	0.00	0.00
7744	20A	2V7 MT2	10/26/90	0.801	0.00	<	0.05	0.00	> 0.20
7744	20A	364 MT2	11/20/90	0.804	0.00	<	0.95	>	246.76 > 19.94
7745	20A	2V8 CEM	10/30/90	0.958	0.00		21.70	0.00	0.00
7745	20A	2M0 MT2	10/10/90	1.101	0.00		3.20	0.00	0.01
7746	20A	2V8 CEM	10/30/90	0.958	0.00		3.57	0.00	0.00
7746	20A	2M0 MT2	10/10/90	1.359	0.00	<	0.32	0.00	0.00
7747	20A	2V8 CEM	10/30/90	1.030	0.00		12.80	0.00	0.00
7747	20A	2M0 MT2	10/10/90	1.059	0.00		0.23	0.00	0.03
7748	20A	2M0 CEM	10/30/90	1.030	0.00		87.60	0.00	0.00
7748	20A	2M0 MT2	10/10/90	1.374	0.00		0.23	0.00	> 4.00
7749	20A	2V1 CEM	10/30/90	0.793	0.00		0.04	0.00	0.00
7749	20A	2M0 MT2	10/10/90	1.076	0.00	<	0.32	0.00	0.00
7749	20A	2M2 MT2	10/26/90	0.863	0.00		0.01	0.00	> 0.53
7750	20A	361 MT2	11/20/90	0.808	0.00		0.02	0.00	0.20
7750	20A	2V1 CEM	10/30/90	0.793	0.00		0.02	0.00	0.00
7750	20A	2M0 MT2	10/10/90	1.201	0.00	<	0.32	0.00	0.00
7750	20A	2M2 MT2	10/26/90	0.863	0.00		0.03	0.00	0.06
7751	20A	2V1 CEM	10/30/90	0.801	0.00	>	100.00	0.00	0.00
7751	20A	2M0 MT2	10/10/90	1.201	0.00		1.06	0.00	> 0.04
7752	20A	2V1 CEM	10/30/90	0.801	0.00	>	100.00	0.00	0.00
7752	20A	2M0 MT2	10/10/90	1.210	0.00		0.23	0.00	0.80

## Cumulative Summary (cont'd)

AVB	Ship- No.	Plt Cell # Line	Test Date	Dif- ferential	IC 50	TC 25	SI	TAI
7753	20A	2V2 CEM	10/30/90	0.919	0.00	3.66	0.00	0.00
7753	20A	2H1 HT2	10/10/90	1.210	0.73	0.26	0.35	4.19
7754	20A	2V2 CEM	10/30/90	0.919	0.00	1.73	0.00	0.00
7754	20A	2H2 HT2	10/10/90	0.970	0.00	0.32	0.00	0.00
7755	20A	2H0 CEM	10/30/90	0.970	0.00	1.55	0.00	0.00
7755	20A	2H2 HT2	10/10/90	0.970	0.00	0.32	0.00	0.00
7756	20A	2H0 CEM	10/30/90	0.970	0.00	> 100.00	0.00	0.00
7756	20A	2H0 HT2	10/10/90	0.962	0.00	0.26	0.00	0.00
7757	20A	2H1 CEM	10/30/90	1.334	0.00	5.70	0.00	0.00
7757	20A	2H2 HT2	10/10/90	0.962	0.00	0.30	0.00	0.00
7758	20A	2H1 CEM	10/30/90	1.334	0.00	4.67	0.00	0.00
7758	20A	2H1 HT2	10/10/90	1.042	0.00	0.32	0.00	0.00
7759	20A	2H2 CEM	10/30/90	0.896	0.00	2.67	0.00	0.00
7759	20A	2H1 HT2	10/10/90	1.042	0.00	0.32	0.00	0.00
7760	20A	2H2 CEM	10/30/90	0.896	0.00	5.18	0.00	0.00
7760	20A	2H2 HT2	10/10/90	1.069	0.00	1.54	0.00	0.07
7761	20A	2H3 CEM	10/30/90	0.890	0.00	20.20	0.00	0.00
7761	20A	2H2 HT2	10/10/90	1.069	7.04	15.50	2.20	10.09
7761	20A	2H0 HT2	10/26/90	0.918	0.00	> 1.00	0.00	> 3.45
7762	20A	2H3 CEM	10/30/90	0.890	0.00	> 100.00	0.00	0.00
7762	20A	2H3 HT2	10/10/90	1.007	0.00	> 100.00	0.00	> 7.78
7763	20A	2H6 CEM	10/30/90	0.925	0.00	> 100.00	0.00	0.00
7763	20A	2H3 HT2	10/10/90	1.007	0.00	> 100.00	0.00	1.67
7764	20A	2H4 CEM	10/30/90	0.925	0.00	15.80	0.00	0.00
7764	20A	2H6 HT2	10/10/90	0.940	0.00	4.45	0.00	0.75
7765	20A	2H5 CEM	10/30/90	0.916	0.00	> 100.00	0.00	> 4.81
7765	20A	2H4 HT2	10/10/90	0.990	0.00	54.10	0.00	> 9.66
7766	20A	2H5 HT2	10/10/90	1.180	0.00	> 100.00	0.00	> 4.11
7767	20A	2H6 CEM	10/30/90	0.710	0.00	> 100.00	0.00	0.00
7767	20A	2H5 HT2	10/10/90	1.180	0.43	> 100.00	> 159.87	> 9.73
7768	20A	2H6 HT2	10/10/90	1.173	74.70	100.00	> 1.34	> 5.83
7769	20A	2H7 CEM	10/30/90	0.846	0.00	> 100.00	0.00	> 5.81
7769	20A	2H6 HT2	10/10/90	1.173	0.00	> 100.00	0.00	> 13.29
7770	20A	2H7 HT2	10/10/90	1.003	0.00	> 100.00	0.00	> 12.67
7771	20A	2H8 CEM	10/30/90	0.858	0.00	> 100.00	0.00	1.51
7771	20A	2H7 HT2	10/10/90	1.003	0.00	> 100.00	0.00	> 2.43
7772	20A	2H8 CEM	10/30/90	0.858	0.00	15.10	0.00	0.00
7772	20A	2H8 HT2	10/10/90	1.072	0.00	4.97	0.00	0.87
7773	20A	2H9 CEM	10/30/90	0.901	0.00	1.93	0.00	0.10
7773	20A	2H8 HT2	10/10/90	1.072	0.00	1.43	0.00	1.38
7774	20A	2H9 CEM	10/30/90	0.901	0.00	> 100.00	0.00	0.81
7774	20A	2H9 HT2	10/10/90	1.076	1.75	> 100.00	> 57.22	> 38.93
7774	20A	3H4 HT2	11/20/90	0.340	0.00	0.14	0.00	0.00
7775	20A	2H4 CEM	10/30/90	0.859	0.00	4.90	0.00	> 2.18
7775	20A	2H9 HT2	10/10/90	1.076	0.00	1.26	0.00	> 6.85
7776	20A	2H4 CEM	10/30/90	0.859	0.00	< 0.00	0.00	0.00
7776	20A	3H2 CEM	11/14/90	0.798	0.00	< 0.00	0.00	0.00
7777	20A	2H4 HT2	10/10/90	0.926	0.00	< 0.32	0.00	0.00
7777	20A	2H8 CEM	10/30/90	0.952	0.00	> 10.00	0.00	> 9.93
7777	20A	2H4 HT2	10/10/90	0.926	0.00	0.57	0.00	> 1.13
7778	20A	2H8 CEM	10/30/90	0.752	0.00	35.40	0.00	> 11.61
7778	20A	2H6 HT2	10/10/90	1.166	0.32	1.75	> 5.47	> 5.17
7779	20A	2H4 CEM	10/30/90	0.939	0.00	25.20	0.00	> 5.52
7779	20A	2H8 HT2	10/10/90	1.166	0.00	10.00	0.00	> 17.68
7780	20A	2H9 CEM	10/31/90	1.010	0.00	> 100.00	0.00	> 5.70
7780	20A	2H1 HT2	10/30/90	1.187	0.00	> 100.00	0.00	> 3.99
7781	20A	2H9 CEM	10/31/90	1.010	0.00	7.80	0.00	0.67
7781	20A	2H0 HT2	10/11/90	0.345	0.00	6.24	0.00	3.67
7782	20A	2H9 CEM	10/31/90	1.046	0.00	> 100.00	0.00	> 1.48
7782	20A	2H1 HT2	10/11/90	0.661	0.00	> 100.00	0.00	> 0.60
7783	20A	2H9 CEM	10/31/90	1.046	0.00	> 100.00	0.00	> 4.81
7783	20A	2H1 HT2	10/11/90	0.661	0.00	> 100.00	0.00	0.00
7784	20A	2H9 CEM	10/31/90	1.013	0.30	> 100.00	0.00	0.00
7784	20A	2H2 HT2	10/11/90	0.909	0.00	> 100.00	0.00	> 12.98
7785	20A	2H9 CEM	10/31/90	1.313	0.00	> 100.00	0.00	> 1.60
7785	20A	2H2 HT2	10/11/90	0.909	0.00	> 100.00	0.00	> 16.62
7786	20A	2H8 CEM	10/31/90	1.060	0.00	50.30	0.00	1.85
7786	20A	2H1 HT2	10/30/90	1.187	0.00	14.00	0.00	0.15
7787	20A	2H9 CEM	10/31/90	1.060	19.00	53.00	2.79	16.86
7787	20A	3H3 CEM	11/14/90	0.576	9.29	2.83	0.30	> 29.69
7787	20A	2H3 HT2	10/11/90	1.005	0.00	50.90	0.00	> 16.81
7788	20A	2H8 CEM	10/31/90	1.265	0.00	37.20	0.00	0.00
7788	20A	2H4 HT2	10/11/90	0.599	0.00	50.30	0.00	7.73
7789	20A	2H8 CEM	10/31/90	1.265	0.00	5.95	0.00	> 1.41
7789	20A	2H4 HT2	10/11/90	0.599	0.00	2.76	0.00	0.11
7790	20A	2H1 CEM	10/31/90	1.148	0.00	> 100.00	0.00	> 3.40
7790	20A	2H4 HT2	10/30/90	1.182	0.00	> 100.00	0.00	> 0.21
7791	20A	2H1 CEM	10/31/90	1.148	0.00	72.00	0.00	1.18

## Cumulative Summary (cont'd)

Avg No.	Min- Date	Fit Cell # Line	Test Date	Differ- mtl.	TC 50	TC 25	\$1	TAD
7791	20A	208	MT2	10/11/90	0.826	0.00 > 100.00	0.00	0.00
7792	20A	204	CEM	10/31/90	1.133	0.00 15.80	0.00 >	8.64
7792	20A	206	MT2	10/11/90	0.831	0.00 17.00	0.00	15.12
7793	20A	200	CEM	10/31/90	1.133	0.00 > 100.00	0.00 >	6.09
7793	20A	206	MT2	10/11/90	0.831	0.00 > 100.00	0.00 >	5.74
7794	20A	204	CEM	10/31/90	1.133	0.00 21.00	0.00	0.59
7794	22A	310	CEM	11/02/90	1.081	0.00 7.57	0.00	0.00
7794	20A	207	MT2	10/11/90	0.975	0.00 > 100.00	0.00 >	5.27
7795	20A	204	CEM	10/31/90	1.133	0.00 49.00	0.00	0.00
7795	20A	207	MT2	10/11/90	0.975	0.00 > 49.00	0.00	8.23
7796	20A	204	CEM	10/31/90	1.170	0.00 > 100.00	0.00	0.00
7796	20A	208	MT2	10/11/90	0.720	0.00 0.16	0.00 >	7.01
7797	20A	204	CEM	10/31/90	1.170	0.00 > 100.00	0.00 >	1.11
7797	20A	208	MT2	10/11/90	0.720	0.00 28.90	0.00	0.26
7798	20A	204	CEM	10/31/90	1.181	0.00 17.40	0.00	0.00
7798	20A	204	MT2	10/30/90	1.224	0.00 4.52	0.00	0.71
7799	20A	204	CEM	10/31/90	1.181	0.00 5.11	0.00	0.00
7799	20A	209	MT2	10/11/90	0.651	0.00 8.68	0.00	6.47
7800	20A	204	CEM	10/31/90	1.163	0.00 > 100.00	0.00	0.00
7800	20A	204	MT2	10/11/90	0.510	0.00 > 100.00	0.00	4.61
7801	20A	204	CEM	10/31/90	1.163	0.00 47.50	0.00	2.29
7801	20A	204	MT2	10/11/90	0.510	5.76 42.20	7.32	25.85
7801	20A	204	CEM	10/30/90	1.224	0.00 12.80	0.00	3.07
7802	20A	204	CEM	10/31/90	1.095	0.00 > 100.00	0.00	0.00
7802	20A	208	MT2	10/11/90	0.841	0.00 > 100.00	0.00 >	19.44
7803	20A	204	CEM	10/31/90	1.095	0.00 > 100.00	0.00	0.40
7803	20A	208	MT2	10/11/90	0.841	0.00 > 100.00	0.00 >	1.79
7804	20A	204	CEM	10/31/90	1.118	0.00 > 100.00	0.00	0.00
7804	20A	204	MT2	10/11/90	0.708	0.00 > 100.00	0.00 >	0.78
7805	20A	204	CEM	10/31/90	1.118	0.00 > 100.00	0.00	1.12
7805	20A	204	MT2	10/11/90	0.708	0.00 > 100.00	0.00	0.78
7806	20A	204	CEM	10/31/90	1.132	0.00 > 100.00	0.00 >	3.51
7806	20A	208	MT2	10/11/90	0.588	0.00 > 100.00	0.00 >	13.62
7807	20A	204	CEM	10/31/90	1.132	0.00 1.97	0.00 >	0.19
7807	20A	204	CEM	11/04/90	0.573	0.00 0.15	0.00	0.00
7807	20A	208	MT2	10/11/90	0.588	0.00 1.51	0.00 >	3.59
7808	20A	204	CEM	10/31/90	1.192	0.00 > 100.00	0.00 >	0.80
7808	20A	204	MT2	10/11/90	0.795	0.00 > 100.00	0.00 >	7.58
7809	20A	204	CEM	10/31/90	1.192	0.00 > 100.00	0.00	0.00
7809	20A	204	MT2	10/11/90	0.795	0.00 > 100.00	0.00 >	19.66
7810	20A	204	CEM	10/31/90	0.849	0.00 > 100.00	0.00 >	8.80
7810	20A	204	MT2	10/11/90	0.904	0.00 > 100.00	0.00 >	14.55
7811	20A	204	CEM	10/31/90	0.849	0.00 32.00	0.00 >	7.24
7811	20A	204	MT2	10/30/90	1.187	0.00 3.25	0.00	0.00
7812	20A	204	CEM	10/31/90	0.928	0.00 18.50	0.00	0.87
7812	20A	204	MT2	10/11/90	0.323	0.00 17.10	0.00	0.00
7813	20A	204	CEM	10/31/90	1.028	0.00 49.00	0.00 >	3.51
7813	20A	204	CEM	10/11/90	0.323	0.00 50.30	0.00	0.00
7814	20A	204	CEM	10/31/90	0.961	0.00 39.30	0.00 >	5.44
7814	20A	204	MT2	10/11/90	0.829	0.00 25.70	0.00	0.20
7815	20A	204	CEM	10/31/90	0.961	0.00 11.10	0.00 >	7.54
7815	20A	204	MT2	10/11/90	0.829	0.00 10.00	0.00 >	4.05
7816	20A	204	CEM	10/31/90	1.162	0.00 17.40	0.00	3.32
7816	20A	204	CEM	10/11/90	0.323	0.00 44.90	> 146.58	> 19.39
7817	20A	204	CEM	10/31/90	1.162	0.00 49.00	0.00	4.81
7817	20A	204	CEM	10/11/90	0.892	5.16 > 100.00	> 19.38	> 54.17
7817	20A	204	MT2	10/30/90	1.187	0.00 15.70	0.00 >	0.02
7818	20A	204	CEM	10/31/90	0.987	0.00 17.20	0.00	0.00
7818	20A	204	CEM	10/12/90	0.922	0.00 15.80	0.00	0.30
7819	20A	204	CEM	10/31/90	0.987	0.00 92.70	0.00	8.92
7819	20A	204	CEM	10/12/90	0.922	0.00 56.60	0.00	0.30
7820	20A	204	CEM	10/31/90	0.928	0.00 54.40	0.00	0.00
7820	20A	204	CEM	10/12/90	0.873	7.31 33.00	4.22 >	18.26
7821	20A	204	CEM	10/31/90	0.923	0.00 12.80	0.00	0.30
7821	20A	204	CEM	10/12/90	0.87	0.00 11.1	0.00 >	2.39
7822	20A	204	CEM	10/31/90	1.070	0.00 30	0.00	0.00
7822	20A	204	CEM	10/12/90	0.921	0.00 30	0.00	4.73
7823	20A	204	CEM	10/31/90	1.070	0.00 > 100.00	0.00	0.00
7823	20A	204	CEM	10/12/90	0.921	0.00 > 100.00	0.00 >	4.07
7824	20A	204	CEM	10/31/90	1.071	0.00 6.67	0.00	0.00
7824	20A	204	CEM	10/12/90	1.071	0.43 7.51	17.50 >	29.60
7825	20A	204	CEM	10/30/90	1.234	0.00 14.10	0.00	0.24
7825	20A	204	CEM	10/31/91	1.057	0.00 > 100.00	0.00 >	3.34
7825	20A	204	CEM	10/12/90	1.071	76.60 > 100.00	> 1.27	> 8.71
7826	20A	204	CEM	10/31/90	1.043	0.00 18.70	0.00	2.83
7826	20A	204	CEM	10/12/90	1.072	0.30 > 100.00	0.00 >	5.15
7827	20A	204	CEM	10/31/90	0.943	0.00 5.90	0.00 >	15.28
7827	20A	204	CEM	10/12/90	1.072	0.00 17.30	0.00	0.47

## Cumulative Summary (cont'd)

AVG	Ship- ment #	Flt call # Line	Test Date	Diff- mtl.	10.50	10.25	85	745
7828	20A	ZYC CEM	10/31/90	1.037	0.00	> 100.00	0.00	0.35
7828	20A	ZPC MT2	10/12/90	1.082	0.00	13.40	0.00	0.03
7829	20A	ZYC CEM	10/31/90	1.037	0.00	15.80	0.00	1.40
7829	20A	ZPC MT2	10/12/90	1.082	0.00	13.00	0.00	12.13
7830	20A	ZTD CEM	10/31/90	1.173	0.00	16.80	0.00	3.30
7830	20A	ZPO MT2	10/12/90	1.016	0.00	> 100.00	0.00	9.65
7831	20A	ZTD CEM	10/31/90	1.173	0.00	> 100.00	0.00	0.00
7831	20A	ZPO MT2	10/12/90	1.016	0.00	11.10	0.00	0.00
7832	20A	ZYE CEM	10/31/90	1.246	0.00	16.80	0.00	0.00
7832	20A	ZPF MT2	10/12/90	0.892	0.00	32.90	0.00	2.15
7833	20A	ZYE CEM	10/31/90	1.246	0.00	> 100.00	0.00	0.00
7833	20A	ZPE MT2	10/12/90	0.892	0.00	1.00	0.00	0.50
7834	20A	ZYF CEM	10/31/90	1.160	0.00	32.90	0.00	0.00
7834	20A	ZPF MT2	10/12/90	0.937	0.00	30.30	0.00	3.22
7835	20A	ZYF CEM	10/31/90	1.160	0.00	5.64	0.00	0.12
7835	20A	ZXL MT2	10/30/90	1.236	0.00	18.50	0.00	0.00
7836	20A	ZTE CEM	10/31/90	1.133	0.00	22.20	0.00	0.00
7836	20A	ZPK MT2	10/12/90	1.043	0.00	1.81	0.00	0.00
7837	20A	ZYG CEM	10/31/90	1.133	0.00	67.20	0.00	0.00
7837	20A	ZPK MT2	10/12/90	1.043	0.00	34.60	0.00	4.72
7838	20A	ZTH CEM	10/31/90	1.135	0.00	11.20	0.00	0.00
7838	20A	ZPK MT2	10/12/90	1.074	0.00	1.70	0.00	2.41
7839	20A	ZTH CEM	10/31/90	1.135	9.58	> 100.00	> 10.44	36.88
7839	20A	366 CEM	11/14/90	0.713	<	3.20	605.00	> 188.95
7839	20A	ZPK MT2	10/12/90	1.074	<	0.32	68.60	> 214.42
7839	20A	ZOM MT2	10/30/90	1.182	2.17	> 100.00	> 4.05	63.36
7840	20A	ZZY CEM	11/01/90	1.148	0.00	16.10	0.00	1.55
7840	20A	ZPL MT2	10/12/90	0.942	0.00	40.30	0.00	5.40
7841	20A	ZZY CEM	11/01/90	1.148	0.00	54.20	0.00	0.30
7841	20A	ZPL MT2	10/12/90	0.942	0.00	43.90	0.00	0.12
7842	20A	ZZZ CEM	11/01/90	1.077	0.00	12.40	0.00	0.00
7842	20A	ZPJ MT2	10/12/90	0.926	0.00	5.78	0.00	0.00
7844	20A	ZZZ CEM	11/01/90	1.077	0.00	15.70	0.00	3.32
7844	20A	ZPJ MT2	10/12/90	0.926	19.60	49.50	2.53	15.81
7844	20A	36E CEM	11/20/90	0.543	0.00	> 100.00	0.00	14.40
7845	20A	300 CEM	11/01/90	1.171	0.00	5.11	0.00	0.05
7845	20A	ZPK MT2	10/12/90	0.992	0.00	16.60	0.00	0.22
7846	20A	300 CEM	11/01/90	1.171	0.00	> 100.00	0.00	0.00
7846	20A	ZPK MT2	10/12/90	0.992	0.00	0.68	0.00	0.00
7846	20A	36E MT2	11/20/90	0.843	0.00	> 10.00	0.00	7.54
7847	20A	301 CEM	11/01/90	1.137	0.00	37.80	0.00	0.91
7847	20A	ZPL MT2	10/12/90	0.917	0.00	2.75	0.00	1.94
7848	20A	301 CEM	11/21/90	1.137	0.00	29.70	0.00	0.60
7848	20A	ZPL MT2	10/12/90	0.917	30.00	> 100.00	> 3.34	19.34
7848	20A	34F MT2	11/20/90	0.905	0.00	20.80	0.00	1.33
7849	20A	302 CEM	11/01/90	1.181	0.00	0.49	0.00	0.00
7849	20A	ZPK MT2	10/12/90	0.593	0.00	1.07	0.00	2.01
7850	20A	302 CEM	11/01/90	1.181	0.00	15.30	0.00	0.00
7850	20A	ZPK MT2	10/12/90	0.593	0.00	65.90	0.00	4.04
7851	20A	303 CEM	11/01/90	1.147	0.00	> 100.00	0.00	1.60
7851	20A	ZPH MT2	10/12/90	1.035	0.00	> 100.00	0.00	23.30
7852	20A	303 CEM	11/01/90	1.147	0.00	4.90	0.00	0.32
7852	20A	ZPH MT2	10/12/90	1.035	0.00	6.90	0.00	3.99
7853	20A	304 CEM	11/01/90	1.172	0.00	15.50	0.00	0.00
7853	20A	34F MT2	11/20/90	0.905	0.00	> 100.00	0.00	11.70
7854	20A	304 CEM	11/01/90	1.172	0.00	0.41	0.00	0.13
7854	20A	ZPO MT2	10/12/90	1.060	0.00	< 0.32	0.00	0.00
7854	20A	36G MT2	11/20/90	0.860	0.00	0.94	0.00	0.04
7855	20A	305 CEM	11/01/90	1.168	0.00	15.50	0.00	0.30
7855	20A	ZPO MT2	10/12/90	1.101	0.00	6.46	0.00	5.43
7856	20A	305 CEM	11/01/90	1.168	0.00	17.40	0.00	0.30
7856	20A	366 MT2	11/20/90	0.560	0.00	0.23	0.00	1.10
7857	20A	ZPO MT2	10/17/90	0.561	0.00	17.60	0.00	3.28
7858	20A	ZPO MT2	10/17/90	0.561	0.00	46.90	0.00	0.00
7859	20A	364 MT2	11/20/90	0.961	0.00	> 100.00	0.00	0.73
7860	20A	ZPO MT2	10/17/90	0.690	5.66	15.50	2.76	14.98
7861	20A	ZPO MT2	10/17/90	0.579	67.70	> 100.00	> 2.10	14.34
7862	20A	ZPO MT2	10/17/90	0.579	0.00	15.60	0.00	0.00
7863	20A	ZPO MT2	10/17/90	0.703	0.00	15.60	0.00	1.31
7864	20A	ZPO MT2	10/17/90	0.703	0.00	2.49	0.00	0.51
7865	20A	ZPO MT2	10/17/90	0.569	0.00	21.50	0.00	1.30
7866	20A	ZPO MT2	10/17/90	0.569	0.00	1.55	0.00	1.99
7867	20A	ZPT MT2	10/17/90	0.680	0.00	15.50	0.00	0.00
7868	20A	ZPT MT2	10/17/90	0.680	5.45	49.00	9.00	34.12
7869	20A	ZPU MT2	10/17/90	0.774	0.00	1.58	0.00	2.43
7870	20A	ZPU MT2	10/17/90	0.774	0.00	0.50	0.00	0.12
7871	20A	ZPV MT2	10/17/90	2.532	7.14	17.50	2.44	10.59
7872	20A	ZPV MT2	10/17/90	0.532	17.90	49.00	2.74	15.08

## Cumulative Summary (Cont'd)

Av#	Ship- ment	Pix Cell # Line	Date	diff- mtl.	TC 50	TC 25	\$I	TAI
7873	20A	20W HT2	10/17/90	0.625	0.00 > 100.00	0.00	0.00	
7874	20A	20W HT2	10/17/90	0.435	17.10 49.00	2.84	15.74	
7875	20A	20X HT2	10/17/90	0.719	17.30 49.20	2.83	17.13	
7876	20A	20X HT2	10/17/90	0.719	0.00 0.49	0.00	0.00	
7877	20A	20Y HT2	10/17/90	3.785	0.00 > 100.00	0.00 >	8.29	
7878	20A	20Y HT2	10/17/90	0.785	0.00 16.30	0.00	7.64	
7879	20A	20Z HT2	10/17/90	0.736	0.00 > 100.00	0.00 >	9.00	
7880	20A	20Z HT2	10/17/90	0.736	0.00 51.20	0.00	6.00	
7881	20A	210 HT2	10/17/90	0.761	0.00 23.80	0.00	0.00	
7882	20A	21Y HT2	10/18/90	1.011	0.00 6.92	0.00	2.01	
7882	20A	215 HT2	10/26/90	0.846	0.00 15.50	0.00 >	6.38	
7882	20A	34H HT2	11/20/90	0.941	0.00 > 1.00	0.00 >	5.65	
7883	20A	21Y HT2	10/18/90	1.011	0.32 < 0.32	0.00	0.00	
7883	20A	215 HT2	10/26/90	0.846	0.00 0.51	0.00 >	0.09	
7884	20A	21T HT2	10/26/90	0.759	0.00 > 100.00	0.00 >	0.51	
7885	20A	21T HT2	10/26/90	0.759	0.00 49.00	0.00	3.27	
7886	20A	210 HT2	10/18/90	0.824	0.00 20.60	0.00 >	8.01	
7886	20A	210 HT2	10/26/90	0.956	0.00 49.20	0.00	6.49	
7887	20A	21U HT2	10/26/90	0.856	14.70 > 100.00	> 6.79 >	36.27	
7888	20A	211 HT2	10/18/90	0.598	17.00 > 100.00	> 5.89 >	38.78	
7888	20A	21U HT2	10/26/90	0.817	140.00 490.00	> 3.50 >	22.68	
7889	20A	21U HT2	10/26/90	0.817	65.10 > 100.00	> 1.54 >	8.62	
7890	20A	232 HT2	10/18/90	0.835	4.76 > 100.00	> 29.99 >	52.44	
7890	20A	21U HT2	10/26/90	0.877	23.60 553.00	> 23.45 >	38.59	
7891	19A	28U CEM	09/04/90	0.818	0.02 5.30	342.99 >	35.10	
7891	19A	297 CEM	09/05/90	1.121	0.00 2.66	0.00 >	58.02	
7891	19A	24V CEM	09/11/90	0.927	0.05 5.62	199.72 >	31.05	
7891	19A	295 HT2	09/04/90	1.392	0.05 > 10.00	> 213.19 >	45.70	
7891	19A	29V HT2	09/05/90	1.163	0.00 3.25	0.00	0.00	
7891	19A	29T HT2	09/05/90	1.316	0.01 3.25	325.00 >	7.90	
7892	74	34F CEM	11/27/90	1.236	0.00 12.20	0.00 >	1.61	
7892	74	37Y HT2	11/27/90	0.867	0.00 15.60	0.00	9.19	
7893	74	34G CEM	11/27/90	1.090	0.00 > 100.00	0.00 >	0.72	
7893	74	37W HT2	11/27/90	0.673	0.00 > 100.00	0.00	17.64	
7895	74	34G CEM	11/27/90	1.040	0.00 > 100.00	0.00 >	3.79	
7895	74	37W HT2	11/27/90	0.673	0.00 > 100.00	0.00	13.24	
7896	74	34M CEM	11/27/90	1.173	0.00 > 100.00	0.00	0.28	
7896	74	37X HT2	11/27/90	0.904	0.00 > 100.00	0.00 >	5.51	
7897	74	34M CEM	11/27/90	1.173	0.00 > 100.00	0.00 >	2.08	
7897	74	37X HT2	11/27/90	0.904	0.00 0.30	0.00 >	10.45	
7898	74	34L CEM	11/27/90	1.127	0.00 34.30	0.00	0.45	
7898	74	37Y HT2	11/27/90	0.816	0.00 55.60	0.00 >	8.44	
7899	74	341 CEM	11/27/90	1.127	0.00 78.30	0.00 >	8.48	
7899	74	37Y HT2	11/27/90	0.816	0.00 > 100.00	0.00 >	15.61	
7900	74	34U CEM	11/27/90	1.004	0.00 > 100.00	0.00	0.02	
7900	74	37Z HT2	11/27/90	0.811	0.00 > 100.00	0.00 >	11.29	
7901	74	34U CEM	11/27/90	1.004	0.00 > 100.00	0.00	1.31	
7901	74	37Z HT2	11/27/90	0.811	0.00 > 100.00	0.00 >	14.91	
7902	74	34K CEM	11/27/90	1.247	0.00 3.20	0.00	0.34	
7902	74	380 HT2	11/27/90	0.802	0.00 > 100.00	3.00	2.50	
7903	74	34K CEM	11/27/90	1.247	0.00 > 100.00	0.00 >	2.46	
7903	74	380 HT2	11/27/90	0.802	0.00 > 100.00	0.00 >	3.20	
7904	74	34L CEM	11/27/90	1.194	0.00 49.41	0.00	0.84	
7905	74	34L CEM	11/27/90	1.194	78.10 > 100.00	> 1.28 >	15.87	
7905	74	341 HT2	11/27/90	0.627	0.00 0.28	0.00	0.00	
7906	74	34T CEM	11/27/90	1.112	0.00 > 100.00	0.00	1.15	
7906	74	349 HT2	11/27/90	0.879	0.00 80.20	0.00 >	6.63	
7907	74	34M CEM	11/27/90	1.103	0.00 > 100.00	0.00 >	0.98	
7907	74	342 HT2	11/27/90	0.674	0.00 > 100.00	3.00 >	18.61	
7908	74	34M CEM	11/27/90	1.103	0.00 0.17	0.00	0.36	
7908	74	342 HT2	11/27/90	0.674	0.00 70.60	0.00	9.92	
7909	74	34N CEM	11/27/90	1.222	0.00 > 100.00	0.00 >	6.04	
7909	74	343 HT2	11/27/90	0.730	0.00 > 100.00	2.00 >	13.42	
7910	74	34M CEM	11/27/90	1.222	0.00 > 100.00	0.00 >	3.20	
7910	74	343 HT2	11/27/90	0.730	0.00 > 100.00	0.00 >	9.00	
7911	74	340 CEM	11/27/90	0.951	0.00 5.40	0.00 >	1.34	
7911	74	344 HT2	11/27/90	0.726	0.00 2.40	0.00 >	0.49	
7912	74	340 CEM	11/27/90	0.951	0.00 > 100.00	0.00 >	8.19	
7912	74	344 HT2	11/27/90	0.726	0.00 0.15	0.00	7.25	
7913	74	34P CEM	11/27/90	1.107	0.00 0.22	0.00	0.30	
7913	74	345 HT2	11/27/90	0.709	0.00 > 100.00	0.00	3.56	
7914	74	34P CEM	11/27/90	1.107	0.00 > 100.00	0.00	0.00	
7914	74	345 HT2	11/27/90	0.709	0.00 > 100.00	0.00	0.00	
7915	74	34C DE4	11/27/90	0.954	0.00 > 100.00	0.00 >	2.61	
7915	74	346 HT2	11/27/90	0.736	0.00 > 100.00	0.00	3.61	
7916	74	346 CEM	11/27/90	0.952	0.00 > 100.00	0.00 >	3.31	
7916	74	346 HT2	11/27/90	0.736	0.00 > 100.00	0.00	0.20	
7917	74	348 CEM	11/27/90	1.148	0.00 0.31	0.00	0.07	

## CUMULATIVE SUMMARY (cont'd)

AVB	Ship-	Pit	Cell	Test	Diff-				
No.	numc	#	Line	Date	mtt.	IC SG	TC SG	SI	TAI
7917	74	387	MT2	11/27/90	0.734	0.00	> 100.00	0.00	> 10.53
7918	74	388	CEM	11/27/90	1.148	0.00	> 92.00	0.00	> 0.02
7918	74	387	MT2	11/27/90	0.734	0.00	> 100.00	0.00	> 8.74
7919	74	388	CEM	11/27/90	1.062	0.00	< 3.20	0.00	> 2.57
7919	74	388	MT2	11/27/90	0.742	0.00	> 100.00	0.00	> 14.40
7920	74	388	CEM	11/27/90	1.062	0.00	> 100.00	0.00	> 0.37
7920	74	388	MT2	11/27/90	0.742	0.00	> 100.00	0.00	> 14.43
7921	74	39F	CEM	11/29/90	1.376	0.00	> 100.00	0.00	> 1.35
7921	74	38V	MT2	11/29/90	1.044	0.00	> 100.00	0.00	> 0.00
7922	74	39F	CEM	11/29/90	1.376	0.00	> 100.00	0.00	> 16.77
7922	74	38V	MT2	11/29/90	1.044	0.00	< 0.14	0.00	> 0.05
7923	74	37G	CEM	11/29/90	1.385	0.00	> 100.00	0.00	> 7.49
7923	74	38H	MT2	11/29/90	0.982	0.00	< 44.70	0.00	> 0.00
7924	74	37G	CEM	11/29/90	1.385	0.00	< 90.90	0.00	> 0.00
7924	74	38W	MT2	11/29/90	0.982	0.00	< 0.32	0.00	> 0.00
7925	74	39W	CEM	11/29/90	1.418	0.00	> 100.00	0.00	> 4.90
7925	74	38X	MT2	11/29/90	1.090	0.00	< 1.00	0.00	> 0.00
7926	74	39W	CEM	11/29/90	1.418	0.00	> 100.00	0.00	> 4.40
7926	74	38X	MT2	11/29/90	1.090	0.00	< 1.00	0.00	> 0.00
7927	74	391	CEM	11/29/90	1.462	0.00	< 66.00	0.00	> 0.00
7927	74	38Y	MT2	11/29/90	1.001	0.00	< 41.70	0.00	> 3.58
7928	74	391	CEM	11/29/90	1.462	65.00	> 100.00	1.53	> 9.00
7929	74	37J	CEM	11/29/90	1.040	0.00	> 100.00	0.00	> 4.34
7929	74	38Z	MT2	11/29/90	1.065	0.00	< 15.50	0.00	> 0.00
7930	74	39J	CEM	11/29/90	1.040	16.10	> 100.00	6.19	> 38.38
7930	74	3AE	CEM	01/04/91	1.397	36.50	> 1000.00	27.40	> 56.53
7930	74	38Z	MT2	11/29/90	1.065	0.00	< 0.20	0.00	> 1.90
7931	74	39K	CEM	11/29/90	1.401	0.00	< 2.47	0.00	> 0.00
7931	74	390	MT2	11/29/90	0.879	0.00	< 59.00	0.00	> 12.25
7932	74	39K	CEM	11/29/90	1.401	0.00	> 100.00	0.00	> 0.66
7932	74	390	MT2	11/29/90	0.879	0.00	< 0.20	0.00	> 0.57
7933	74	39L	CEM	11/29/90	1.244	0.00	< 19.90	0.00	> 0.28
7933	74	391	MT2	11/29/90	1.041	0.00	< 1.06	0.00	> 0.62
7934	74	37L	CEM	11/29/90	1.244	0.00	> 100.00	0.00	> 1.00
7934	74	391	MT2	11/29/90	1.041	0.00	< 0.14	0.00	> 6.09
7935	74	39W	CEM	11/29/90	1.021	0.00	< 56.60	0.00	> 0.02
7935	74	392	MT2	11/29/90	0.772	0.00	> 100.00	0.00	> 11.60
7934	74	39W	CEM	11/29/90	1.021	0.00	< 80.60	0.00	> 13.29
7936	74	392	MT2	11/29/90	0.772	0.00	< 0.13	0.00	> 5.33
7937	74	39W	CEM	11/29/90	1.357	0.00	< 66.00	0.00	> 1.65
7938	74	39W	CEM	11/29/90	1.357	0.00	< 25.40	0.00	> 5.22
7939	74	390	CEM	11/29/90	1.301	0.00	> 100.00	0.00	> 0.53
7939	74	394	MT2	11/29/90	0.825	0.00	> 100.00	0.00	> 5.85
7940	74	390	CEM	11/29/90	1.301	100.00	< 62.70	0.93	> 3.38
7941	74	39P	CEM	11/29/90	1.148	0.00	> 100.00	0.00	> 6.6
7942	74	39P	CEM	11/29/90	1.148	24.80	< 69.00	1.97	> 11.73
7942	74	34F	CEM	01/04/91	1.447	0.00	< 24.10	0.00	> 2.51
7943	74	390	CEM	11/29/90	1.266	0.00	< 93.80	0.00	> 0.15
7943	74	394	MT2	11/29/90	1.058	0.00	< 9.06	0.00	> 10.98
7944	74	390	CEM	11/29/90	1.366	0.00	> 100.00	0.00	> 2.21
7945	74	390	CEM	11/29/90	1.253	68.00	< 45.60	0.67	> 3.06
7945	74	34F	CEM	01/04/91	1.447	0.00	< 427.00	0.00	> 2.30
7946	74	398	CEM	11/29/90	1.258	0.00	< 10.00	0.00	> 0.00
7946	74	397	MT2	11/29/90	0.951	0.00	< 0.22	0.00	> 0.44
7947	74	398	CEM	11/29/90	0.993	70.60	< 95.00	1.35	> 11.89
7947	74	396	CEM	01/04/91	1.366	65.00	< 695.00	10.69	> 28.25
7948	74	398	CEM	11/29/90	0.993	0.00	> 100.00	0.00	> 2.63
7949	74	39T	CEM	11/29/90	0.965	0.00	> 100.00	0.00	> 9.92
7950	74	39T	CEM	11/29/90	0.465	0.00	> 100.00	0.00	> 3.41
7951	74	39U	CEM	11/29/70	1.179	0.00	> 100.00	0.00	> 5.43
7952	74	39U	CEM	11/29/90	1.179	49.00	> 100.00	2.00	> 21.05
7952	74	34G	CEM	01/04/91	1.356	0.00	< 385.00	0.00	> 5.94
7953	74	39E	CEM	11/29/90	1.202	0.00	< 2.27	0.00	> 0.00
7954	74	34W	CEM	01/04/91	1.376	87.10	< 16.00	0.18	> 10.55
7954	74	4CH	CEM	02/20/91	0.714	5.85	< 0.08	0.01	> 42.0
7955	74	39U	CEM	11/29/90	1.242	0.00	< 82.00	0.00	> 2.72
7956	74	39U	CEM	11/29/90	1.242	0.00	> 100.00	0.00	> 0.00
7957	74	39K	CEM	11/29/90	1.240	0.00	< 27.60	0.00	> 0.00
7958	74	39K	CEM	11/29/90	1.240	0.00	> 100.00	0.00	> 0.00
7959	74	34E	CEM	11/30/90	1.140	0.00	< 92.40	0.00	> 0.00
7960	74	34Z	MT2	11/30/90	1.105	0.00	< 100.00	0.00	> 3.26
7960	74	34F	CEM	11/30/90	1.231	4.81	< 64.50	9.26	> 26.75
7960	74	34W	CEM	01/04/91	1.376	3.78	< 13.50	3.60	> 21.81
7961	74	34F	CEM	11/30/90	1.231	17.00	< 44.70	2.43	> 23.43
7961	74	341	CEM	01/04/91	1.397	6.73	< 20.40	3.03	> 15.60
7962	74	34G	CEM	11/30/90	1.211	1.78	< 17.80	10.01	> 31.42
7962	74	341	CEM	01/04/91	1.347	1.01	< 10.50	2.35	> 15.56
7962	74	344	MT2	11/30/90	0.703	0.56	< 0.14	17.29	

## Cumulative Summary (cont'd)

AVS	Ship-	Plt	Cell	Test	Diff-		IC 50	IC 25	SI	TAI
No.	ment	#	Line	Date	mtl.					
7963	74	34G	CEN	11/30/90	1.211		4.81	39.10	8.13	29.23
7963	74	34J	CEN	01/04/91	1.277		6.14	12.70	2.07	12.29
7963	74	34J	MT2	11/30/90	0.953		20.10	0.15	0.01	1.61
7964	74	34H	CEN	11/30/90	1.357		0.00	47.50	0.00	0.00
7964	74	34S	MT2	11/30/90	0.912		0.00	21.70	0.00	7.77
7965	74	34H	CEN	11/30/90	1.357		0.00	> 100.00	0.00	0.00
7965	74	34S	MT2	11/30/90	0.912		0.00	0.14	0.00	5.79
7966	74	34J	CEN	11/30/90	1.301		0.00	> 100.00	0.00	0.04
7966	74	34G	MT2	11/30/90	1.001		0.00	95.50	0.00	1.56
7967	74	34J	CEN	11/30/90	1.301		0.00	51.80	0.00	1.62
7967	74	34G	MT2	11/30/90	1.001		0.00	0.20	0.00	0.03
7968	74	34J	CEN	11/30/90	1.332		0.00	> 100.00	0.00	3.81
7968	74	34T	MT2	11/30/90	1.018		0.00	44.00	0.00	2.97
7969	74	34J	CEN	11/30/90	1.332		0.00	> 100.00	0.00	4.77
7969	74	34T	MT2	11/30/90	1.018		0.00	0.19	0.00	8.39
7970	74	34K	CEN	11/30/90	1.293		0.00	> 100.00	0.00	0.08
7970	74	34B	MT2	11/30/90	1.072		0.00	49.30	0.00	4.70
7971	74	34K	CEN	11/30/90	1.293		0.00	22.80	0.00	0.00
7971	74	34B	MT2	11/30/90	1.072		29.50	0.14	0.00	11.00
7972	74	34L	CEN	11/30/90	1.307		0.00	14.90	0.00	0.00
7972	74	34G	MT2	11/30/90	0.767		0.00	49.50	0.00	4.67
7973	76	35M	CEN	11/14/90	0.650		1.89	0.10	0.04	31.88
7973	74	34J	CEN	01/04/91	1.277	<	0.32	1.62	> 5.05	> 22.00
7973	74	359	MT2	11/14/90	0.760		0.00	< 0.32	0.00	0.00
7974	76	35M	CEN	11/14/90	0.650	<	0.32	> 100.00	> 312.50	> 93.96
7974	76	359	MT2	11/14/90	0.760	<	0.32	> 100.00	> 312.50	> 93.14
7975	76	35W	CEN	11/14/90	0.724		0.32	14.70	> 46.08	> 42.71
7975	76	35A	MT2	11/14/90	0.750		0.37	6.90	> 13.17	> 36.09
7976	76	35W	CEN	11/14/90	0.724	<	0.32	> 100.00	> 312.50	> 90.40
7976	76	35A	MT2	11/14/90	0.750	<	0.32	49.50	> 154.77	> 77.10
7977	76	35O	CEN	11/14/90	0.805	<	0.32	1.00	> 3.13	> 20.56
7977	76	35B	MT2	11/14/90	0.794		93.50	> 100.00	> 1.07	> 2.38
7978	74	35O	CEN	11/14/90	0.805		0.00	> 100.00	0.00	6.21
7978	74	35B	MT2	11/14/90	0.794	<	0.32	1.59	> 4.95	> 24.66
7979	74	35C	MT2	11/14/90	0.721		0.59	49.00	> 82.91	> 60.16
7980	74	34K	CEN	01/04/91	1.477		2.36	12.20	5.17	13.48
7980	74	35C	MT2	11/14/90	0.721		0.00	0.61	0.00	0.00
7981	74	35Q	CEN	11/14/90	0.630	<	0.32	23.40	> 75.17	> 68.80
7981	74	35O	MT2	11/14/90	0.714	<	0.32	4.59	> 14.35	> 40.76
7982	76	35O	MT2	11/14/90	0.714	<	0.32	1.55	> 4.84	> 19.47
7983	74	35R	CEN	11/14/90	0.577		3.74	> 100.00	> 26.71	> 54.72
7983	74	35E	MT2	11/14/90	0.670		1.24	49.20	> 34.54	> 56.17
7984	76	35R	CEN	11/14/90	0.577		42.20	> 100.00	> 2.37	> 21.08
7984	76	35E	MT2	11/14/90	0.670		0.00	55.00	0.00	1.21
7985	76	35G	CEN	11/14/90	0.683		0.00	> 100.00	0.00	2.38
7985	76	35F	MT2	11/14/90	0.711		0.00	> 100.00	0.00	0.00
7986	74	35S	CEN	11/14/90	0.683		0.00	> 100.00	0.00	0.00
7986	74	35F	MT2	11/14/90	0.711		0.00	> 100.00	0.00	0.00
7987	76	35T	CEN	11/14/90	0.675		20.40	> 100.00	> 4.91	> 17.55
7987	76	35G	MT2	11/14/90	0.690		27.50	47.40	1.72	6.41
7988	76	35T	CEN	11/14/90	0.675		13.60	> 100.00	> 7.35	> 28.90
7988	76	35G	MT2	11/14/90	0.690		0.00	49.00	0.00	4.95
7989	74	35U	CEN	11/14/90	0.722		4.61	71.70	16.26	> 41.04
7989	74	35H	MT2	11/14/90	0.743		11.30	39.30	3.47	18.03
7990	76	35H	MT2	11/14/90	0.763		0.00	< 0.32	0.00	0.00
7991	74	35V	CEN	11/14/90	0.742	<	0.32	1.68	> 5.24	> 25.60
7992	74	35V	CEN	11/14/90	0.742		0.00	96.40	0.00	0.53
7993	22A	31Q	CEN	11/02/90	1.081		0.00	> 100.00	0.00	0.12
7993	22A	32A	MT2	11/02/90	1.114		0.00	> 100.00	0.00	0.00
7994	22A	32A	MT2	11/02/90	1.114		0.00	7.67	0.00	0.00
7995	22A	31R	CEN	11/02/90	1.048		0.00	12.60	0.00	3.11
7995	22A	32B	MT2	11/02/90	1.263		0.00	5.94	0.00	0.00
7996	22A	31R	CEN	11/02/90	1.048		0.00	49.00	0.00	12.39
7996	22A	32B	MT2	11/02/90	1.263		0.00	49.00	0.00	0.23
7997	22A	31S	CEN	11/02/90	1.047		0.00	6.16	0.00	0.10
7997	22A	32C	MT2	11/02/90	1.272		0.00	5.47	0.00	0.10
7998	22A	31S	CEN	11/02/90	1.047		0.00	10.00	0.00	0.00
7998	22A	32C	MT2	11/02/90	1.272		0.00	5.38	0.00	0.22
7999	22A	31T	CEN	11/02/90	1.074		0.00	> 100.00	0.00	3.70
7999	22A	32D	MT2	11/02/90	1.266		0.00	6.97	0.00	0.00
8000	22A	31T	CEN	11/02/90	1.074		0.00	2.03	0.00	0.00
8000	22A	32D	MT2	11/02/90	1.246		0.00	> 100.00	0.00	0.00
8001	22A	31U	CEN	11/02/90	1.029		0.00	22.10	0.00	0.00
8001	22A	32E	MT2	11/02/90	1.251		0.00	17.00	0.00	0.00
8002	22A	31U	CEN	11/02/90	1.025		0.00	7.53	0.00	0.00
8002	22A	32E	MT2	11/02/90	1.251		0.00	6.74	0.00	0.00
8003	22A	31V	CEN	11/02/90	0.975		0.00	12.80	0.00	1.13
8003	22A	32F	MT2	11/02/90	1.267		0.00	5.09	0.00	0.00

## CUMULATIVE SUMMARY (cont'd)

AVS	Ship- ment	Pit Cell # Line	Test Date	Diff- mtl.	TC 50	TC 25	SI	TAS
7917	74	387 NT2	11/27/90	0.734	0.00 > 100.00	0.00 > 18.53		
7918	74	388 CEM	11/27/90	1.148	0.00 > 92.00	0.00 > 0.02		
7918	74	387 NT2	11/27/90	0.734	0.00 > 100.00	0.00 > 8.76		
7919	74	388 CEM	11/27/90	1.062	0.00 > 3.20	0.00 > 2.37		
7919	74	388 NT2	11/27/90	0.742	0.00 > 100.00	0.00 > 14.40		
7920	74	388 CEM	11/27/90	1.062	0.00 > 100.00	0.00 > 0.37		
7920	74	388 NT2	11/27/90	0.742	0.00 > 100.00	0.00 > 16.43		
7921	74	389 CEM	11/29/90	1.376	0.00 > 100.00	0.00 > 1.35		
7921	74	389 NT2	11/29/90	1.044	0.00 > 100.00	0.00 > 0.00		
7922	74	389 CEM	11/29/90	1.376	0.00 > 100.00	0.00 > 16.77		
7922	74	389 NT2	11/29/90	1.044	0.00 > 0.16	0.00 > 0.05		
7923	74	390 CEM	11/29/90	1.385	0.00 > 100.00	0.00 > 7.69		
7923	74	388 NT2	11/29/90	0.982	0.00 > 44.70	0.00 > 0.00		
7924	74	390 CEM	11/29/90	1.385	0.00 > 90.90	0.00 > 0.00		
7924	74	388 NT2	11/29/90	0.982	0.00 < 0.32	0.00 > 0.00		
7925	74	390 CEM	11/29/90	1.418	0.00 > 100.00	0.00 > 6.90		
7925	74	388 NT2	11/29/90	1.090	0.00 > 1.00	0.00 > 0.00		
7926	74	390 CEM	11/29/90	1.418	0.00 > 100.00	0.00 > 6.40		
7926	74	388 NT2	11/29/90	1.090	0.00 > 1.00	0.00 > 0.00		
7927	74	391 CEM	11/29/90	1.442	0.00 > 66.00	0.00 > 0.00		
7927	74	389 NT2	11/29/90	1.001	0.00 > 41.70	0.00 > 3.58		
7928	74	391 CEM	11/29/90	1.442	65.60 > 100.00	1.53 > 9.00		
7929	74	391 CEM	11/29/90	1.040	0.00 > 100.00	0.00 > 6.36		
7929	74	382 NT2	11/29/90	1.065	0.00 > 15.50	0.00 > 0.00		
7930	74	391 CEM	11/29/90	1.040	16.10 > 100.00	6.19 > 38.38		
7930	74	391 CEM	01/04/91	1.397	36.50 > 1000.0	27.40 > 56.53		
7930	74	382 NT2	11/29/90	1.065	0.00 > 0.20	0.00 > 1.90		
7931	74	390 CEM	11/29/90	1.401	0.00 > 2.47	0.00 > 0.00		
7931	74	390 NT2	11/29/90	0.379	0.00 > 59.00	0.00 > 12.25		
7932	74	390 CEM	11/29/90	1.401	0.00 > 100.00	0.00 > 0.66		
7932	74	390 NT2	11/29/90	0.879	0.00 > 0.20	0.00 > 0.57		
7933	74	391 CEM	11/29/90	1.244	0.00 > 19.90	0.00 > 0.26		
7933	74	391 NT2	11/29/90	1.041	0.00 > 1.06	0.00 > 0.62		
7934	74	391 CEM	11/29/90	1.244	0.00 > 100.00	0.00 > 1.00		
7934	74	391 NT2	11/29/90	1.041	0.00 > 0.16	0.00 > 6.09		
7935	74	390 CEM	11/29/90	1.021	0.00 > 56.60	0.00 > 0.02		
7935	74	392 NT2	11/29/90	0.772	0.00 > 100.00	0.00 > 11.10		
7936	74	390 CEM	11/29/90	1.021	0.00 > 80.50	0.00 > 13.29		
7936	74	392 NT2	11/29/90	0.772	0.00 > 0.13	0.00 > 5.33		
7937	74	390 CEM	11/29/90	1.357	0.00 > 66.00	0.00 > 1.65		
7938	74	390 CEM	11/29/90	1.357	0.00 > 25.40	0.00 > 5.22		
7939	74	390 CEM	11/29/90	1.301	0.00 > 100.00	0.00 > 0.53		
7939	74	394 NT2	11/29/90	0.825	0.00 > 100.00	0.00 > 5.85		
7940	74	390 CEM	11/29/90	1.301	100.00 > 92.70	0.93 > 3.38		
7941	74	399 CEM	11/29/90	1.148	0.00 > 100.00	0.00 > 6.61		
7942	74	399 CEM	11/29/90	1.148	24.50 > 49.00	1.97 > 11.73		
7942	74	396 CEM	01/04/91	1.667	0.00 > 24.10	0.00 > 2.51		
7943	74	399 CEM	11/29/90	1.366	0.00 > 93.80	0.00 > 0.15		
7943	74	396 NT2	11/29/90	1.058	0.00 > 9.06	0.00 > 10.98		
7944	74	399 CEM	11/29/90	1.366	0.00 > 100.00	0.00 > 2.21		
7945	74	399 CEM	11/29/90	1.258	68.40 > 45.60	0.67 > 3.06		
7945	74	34F CEM	01/04/91	1.447	0.00 > 427.00	0.00 > 3.30		
7946	74	398 CEM	11/29/90	1.258	0.00 > 10.00	0.00 > 0.00		
7946	74	397 NT2	11/29/90	0.951	0.00 > 0.22	0.00 > 0.44		
7947	74	398 CEM	11/29/90	0.993	70.40 > 95.00	1.35 > 11.89		
7947	74	34G CEM	01/04/91	1.366	65.00 > 695.00	10.69 > 28.25		
7948	74	398 CEM	11/29/90	0.993	0.00 > 100.00	0.00 > 2.08		
7949	74	397 CEM	11/29/90	0.965	0.00 > 100.00	0.00 > 9.92		
7950	74	397 CEM	11/29/90	0.965	0.00 > 100.00	0.00 > 3.41		
7951	74	390 CEM	11/29/90	1.179	0.00 > 100.00	0.00 > 5.03		
7952	74	390 CEM	11/29/90	1.179	49.90 > 100.00	2.00 > 21.05		
7952	74	34G CEM	01/04/91	1.366	0.00 > 385.00	0.00 > 5.94		
7953	74	399 CEM	11/29/90	1.202	0.00 > 2.27	0.00 > 0.00		
7954	74	34H CEM	01/04/91	1.376	57.10 > 15.00	0.18 > 10.55		
7954	74	4CW CEM	02/20/91	0.774	2.89 > 0.08	0.01 > 42.01		
7955	74	34U CEM	11/29/90	1.242	0.00 > 82.00	0.00 > 2.72		
7956	74	34W CEM	11/29/90	1.242	0.00 > 100.00	0.00 > 0.00		
7957	74	34X CEM	11/29/90	1.240	0.00 > 27.60	0.00 > 0.00		
7958	74	34X CEM	11/29/90	1.243	0.00 > 100.00	0.00 > 0.00		
7959	74	34E CEM	11/30/90	1.140	0.00 > 92.40	0.00 > 0.00		
7959	74	342 NT2	11/30/90	1.105	0.00 > 100.00	0.00 > 3.25		
7960	74	34F CEM	11/30/90	1.231	4.81 > 44.50	9.26 > 26.75		
7960	74	34H CEM	01/04/91	1.376	3.78 > 13.60	3.60 > 21.81		
7961	74	34F CEM	11/30/90	1.231	17.00 > 64.70	2.63 > 23.43		
7961	74	34I CEM	01/04/91	1.397	6.73 > 20.40	3.03 > 15.69		
7962	74	34G CEM	11/30/90	1.211	1.78 > 17.80	10.01 > 31.42		
7962	74	34I CEM	01/04/91	1.397	6.61 > 10.80	2.35 > 15.56		
7962	74	344 NT2	11/30/90	0.953	3.98 > 0.56	0.16 > 17.29		

## Cumulative Summary (cont'd)

AV#	Ship-	Pit Cell	Test Date	Diff- mtl.	IC 50	TC 25	SI	TAI
No.	ment	# Line						
8004	22A	31V CEM	11/02/90	0.973	0.00	16.10	0.00 >	7.20
8004	22A	32Y MT2	11/02/90	1.267	0.00	14.90	0.00	0.00
8005	22A	31W CEM	11/02/90	0.931	0.00 >	100.00	0.00 >	2.44
8005	22A	32G MT2	11/02/90	1.241	0.00	73.80	0.00	0.00
8016	22A	31V CEM	11/02/90	0.931	0.00	16.70	0.00	0.23
8006	22A	32G MT2	11/02/90	1.241	0.00	15.60	0.00	0.00
8007	22A	31X CEM	11/02/90	0.974	0.00	5.14	0.00 >	8.98
8007	22A	32H MT2	11/02/90	1.271	0.00	1.56	0.00 >	0.10
8008	22A	31X CEM	11/02/90	0.976	0.00	19.90	0.00	7.68
8008	22A	32H MT2	11/02/90	1.271	0.00	49.00	0.00	0.06
8009	22A	31Y CEM	11/02/90	0.934	0.00	68.60	0.00 >	0.13
8009	22A	32I MT2	11/02/90	1.265	0.00	42.50	0.00	0.00
8010	22A	31Y CEM	11/02/90	0.934	0.00	0.45	0.00	0.00
8010	22A	364 CEM	11/14/90	0.713	0.00	0.02	0.00	0.00
8010	22A	32I MT2	11/02/90	1.265	0.00 <	0.32	0.00	0.00
8010	22A	35J MT2	11/14/90	0.718	0.00	0.05	0.00	0.00
8011	22A	31Z CEM	11/02/90	1.033	0.00	9.03	0.00 >	3.12
8011	22A	324 MT2	11/02/90	1.252	0.00	5.90	0.00	0.58
8012	22A	31Z CEM	11/02/90	1.033	0.00	62.90	0.00 >	11.18
8012	22A	32J MT2	11/02/90	1.252	0.00	19.80	0.00	0.00
8013	22A	320 CEM	11/02/90	0.895	0.00	16.00	0.00 >	3.82
8013	22A	32K MT2	11/02/90	1.188	0.00	10.00	0.00	0.00
8014	22A	320 CEM	11/02/90	0.895	0.00	5.09	0.00	2.76
8014	22A	32K MT2	11/02/90	1.188	0.00	3.55	0.00	0.00
8015	22A	321 CEM	11/02/90	0.871	0.00	9.06	0.00	0.85
8015	22A	32L MT2	11/02/90	1.210	0.00	4.33	0.00	0.00
8016	22A	321 CEM	11/02/90	0.871	0.00	16.60	0.00	4.27
8016	22A	32L MT2	11/02/90	1.210	0.00	16.20	0.00	0.00
8017	22A	322 CEM	11/02/90	0.967	0.00	8.64	0.00	0.03
8017	22A	32W MT2	11/02/90	1.295	0.00	3.76	0.00	0.02
8018	22A	322 CEM	11/02/90	0.967	0.00	47.60	0.00	0.00
8018	22A	32W MT2	11/02/90	1.295	0.00	16.60	0.00	0.03
8019	22A	323 CEM	11/02/90	1.049	0.00	49.00	0.00 >	3.64
8019	22A	32W MT2	11/02/90	1.265	0.00	15.90	0.00	0.00
8020	22A	323 CEM	11/02/90	1.049	0.00	90.60	0.00	4.16
8020	22A	32W MT2	11/02/90	1.265	0.00 >	100.00	0.00	0.00
8021	22A	324 CEM	11/02/90	1.027	0.00	51.90	0.00	0.38
8021	22A	32O MT2	11/02/90	1.294	0.00	49.20	0.00	0.12
8022	22A	324 CEM	11/02/90	1.027	0.00	1.44	0.00 >	0.89
8022	22A	32O MT2	11/02/90	1.294	0.00	1.44	0.00	0.00
8023	22A	325 CEM	11/02/90	0.986	0.00	80.90	0.00 >	13.26
8023	22A	32P MT2	11/02/90	1.249	0.00	55.30	0.00	0.00
8024	22A	325 CEM	11/02/90	0.986	0.00 >	100.00	0.00 >	8.93
8024	22A	32P MT2	11/02/90	1.249	0.00 >	100.00	0.00	0.30
8025	22A	326 CEM	11/02/90	1.009	0.00	4.90	0.00 >	5.94
8025	22A	32W MT2	11/02/90	1.243	0.00	1.67	0.00	0.00
8026	22A	326 CEM	11/02/90	1.009	0.00	4.19	0.00 >	4.66
8026	22A	32W MT2	11/02/90	1.243	0.00	1.61	0.00 >	0.41
8027	22A	327 CEM	11/02/90	1.034	0.00	15.40	0.00 >	6.22
8027	22A	32W MT2	11/02/90	1.237	0.00	16.70	0.00	0.36
8028	22A	327 CEM	11/02/90	1.034	0.00	22.20	0.00 >	4.12
8028	22A	32W MT2	11/02/90	1.237	0.00	15.70	0.00	0.00
8029	22A	328 CEM	11/02/90	1.030	0.00 >	100.00	0.00 >	6.11
8029	22A	32W MT2	11/02/90	1.223	0.00	16.10	0.00	0.52
8030	22A	328 CEM	11/02/90	1.030	0.00	4.67	0.00	0.33
8030	22A	32S MT2	11/02/90	1.223	0.00	0.87	0.00 >	0.00
8031	22A	2WY CEM	11/06/90	0.971	0.00	4.75	0.00	0.35
8031	22A	2WY MT2	11/06/90	1.234	0.00	5.18	0.00	0.00
8032	22A	2WY CEM	11/06/90	0.971	0.00	43.30	0.00 >	1.37
8032	22A	2WY MT2	11/06/90	1.234	0.00	49.00	0.00	0.30
8033	22A	2WY CEM	11/06/90	1.131	0.00	24.70	0.00	0.00
8033	22A	2WY MT2	11/06/90	1.255	0.00	92.70	0.00 >	0.10
8034	22A	2WZ CEM	11/06/90	1.131	0.00	71.70	0.00 >	4.90
8034	22A	2WZ MT2	11/06/90	1.255	0.00	86.80	0.00 >	1.63
8035	22A	2X0 CEM	11/06/90	1.104	0.00	45.40	0.00	0.08
8035	22A	2XG MT2	11/06/90	1.242	0.00	53.50	0.00	0.00
8036	22A	2X0 CEM	11/06/90	1.104	0.00	67.30	0.00 >	1.10
8036	22A	2XG MT2	11/06/90	1.242	0.00	58.60	0.00	0.00
8037	22A	2X1 CEM	11/06/90	1.051	0.00	32.00	0.00	2.20
8037	22A	2W1 MT2	11/06/90	1.283	0.00	29.00	0.00	0.00
8038	22A	2X1 CEM	11/06/90	1.051	0.00	3.82	0.00 >	1.84
8038	22A	2W1 MT2	11/06/90	1.283	0.00	49.00	0.00	0.00
8039	22A	2X2 CEM	11/06/90	1.148	0.00	51.10	0.00 >	2.71
8039	22A	362 CEM	11/20/90	1.007	0.00 >	100.00	0.00 >	1.70
8039	22A	2W1 MT2	11/06/90	1.232	0.00	50.10	0.00	0.00
8040	22A	2X2 CEM	11/06/90	1.148	0.00 >	100.00	0.00 >	4.70
8040	22A	2W1 MT2	11/06/90	1.232	0.00 >	100.00	0.00	0.52
8041	22A	2X3 CEM	11/06/90	1.014	73.40	24.40	0.33 >	8.86

## Cumulative Summary (cont'd)

AVG. No.	Ship- ment	Pit Cell # Line	Test Date	Diff- mtl.	IC 50	IC 25	S1	TAS
8041	22A	3XH CEM	11/06/90	0.817	8.41	> 100.00	> 11.25	> 42.14
8041	22A	2WJ MT2	11/06/90	1.281	5.38	15.60	2.00	16.26
8041	22A	367 MT2	11/20/90	0.849	4.22	17.10	4.00	32.28
8042	22A	2X3 CEM	11/06/90	1.019	0.00	> 100.00	0.00	4.87
8042	22A	2WJ MT2	11/06/90	1.281	0.00	> 100.00	0.00	0.34
8043	22A	2X4 CEM	11/06/90	1.149	0.00	15.00	0.00	0.00
8043	22A	2WJ MT2	11/06/90	1.158	0.00	69.00	0.00	0.10
8044	22A	2X4 CEM	11/06/90	1.149	0.00	42.20	0.00	3.25
8044	22A	2WJ MT2	11/06/90	1.158	0.00	> 100.00	0.00	1.53
8045	22A	2X5 CEM	11/06/90	0.925	0.00	23.50	0.00	2.72
8045	22A	2WL MT2	11/06/90	1.246	0.00	20.80	0.00	0.60
8046	22A	2X5 CEM	11/06/90	0.925	0.00	> 100.00	0.00	4.04
8046	22A	2WL MT2	11/06/90	1.246	0.00	> 100.00	0.00	1.80
8047	22A	2X6 CEM	11/06/90	1.034	0.00	16.60	0.00	0.00
8047	22A	2WJ MT2	11/06/90	1.257	0.00	45.70	0.00	0.40
8048	22A	2X6 CEM	11/06/90	1.034	0.00	67.10	0.00	0.18
8048	22A	2WJ MT2	11/06/90	1.267	0.00	> 100.00	0.00	0.49
8049	22A	2X7 CEM	11/06/90	1.081	0.00	37.40	0.00	0.00
8049	22A	2WJ MT2	11/06/90	1.258	0.00	> 100.00	0.00	1.60
8050	22A	2X7 CEM	11/06/90	1.081	0.00	100.00	0.00	0.19
8050	22A	2WJ MT2	11/06/90	1.258	0.00	> 100.00	0.00	1.08
8051	22A	2X8 CEM	11/06/90	1.172	0.00	44.50	0.00	0.21
8051	22A	2WD MT2	11/06/90	1.241	0.00	17.10	0.00	0.61
8052	22A	2X8 CEM	11/06/90	1.172	0.00	43.30	0.00	1.13
8052	22A	2WD MT2	11/06/90	1.241	0.00	49.20	0.00	0.00
8053	22A	2X9 CEM	11/06/90	1.026	0.00	63.70	0.00	3.68
8053	22A	2WP MT2	11/06/90	1.266	0.00	> 100.00	0.00	1.42
8054	22A	2X9 CEM	11/06/90	1.026	0.00	> 100.00	0.00	17.84
8054	22A	2WP MT2	11/06/90	1.266	0.00	> 100.00	0.00	0.85
8055	22A	2XA CEM	11/06/90	1.115	0.00	1.73	0.00	1.36
8055	22A	2WR MT2	11/06/90	1.240	0.00	4.95	0.00	0.10
8056	22A	2XA CEM	11/06/90	1.115	0.00	> 100.00	0.00	6.90
8056	22A	2WR MT2	11/06/90	1.240	0.00	> 100.00	0.00	0.08
8057	22A	2XB CEM	11/06/90	1.106	0.00	> 100.00	0.00	2.86
8057	22A	2WR MT2	11/06/90	1.279	0.00	> 100.00	0.00	3.90
8058	22A	2XB CEM	11/06/90	1.106	0.00	> 100.00	0.00	0.30
8058	22A	2WR MT2	11/06/90	1.279	0.00	> 100.00	0.00	1.29
8059	22A	2XC CEM	11/06/90	1.259	0.00	> 100.00	0.00	0.00
8059	22A	2WS MT2	11/06/90	1.184	0.00	> 100.00	0.00	0.70
8060	22A	2XC CEM	11/06/90	1.259	0.00	> 100.00	0.00	5.75
8060	22A	2WS MT2	11/06/90	1.184	0.00	> 100.00	0.00	0.78
8061	22A	2XD CEM	11/06/90	1.240	0.00	73.80	0.00	0.49
8061	22A	2YT MT2	11/06/90	1.203	0.00	> 100.00	0.00	0.55
8062	22A	2XD CEM	11/06/90	1.240	0.00	> 100.00	0.00	0.03
8062	22A	2YT MT2	11/06/90	1.203	0.00	> 100.00	0.00	0.00
8063	22A	2XE CEM	11/06/90	1.156	0.00	> 100.00	0.00	1.36
8063	22A	2WU MT2	11/06/90	1.187	0.00	> 100.00	0.00	0.80
8064	22A	2XE CEM	11/06/90	1.156	0.00	32.90	0.00	3.66
8064	22A	2WU MT2	11/06/90	1.187	0.00	47.40	0.00	0.10
8065	22A	2XF CEM	11/06/90	1.254	0.00	> 100.00	0.00	5.78
8065	22A	2WV MT2	11/06/90	1.033	0.00	> 100.00	0.00	1.50
8066	22A	2XF CEM	11/06/90	1.254	0.00	> 100.00	0.00	6.45
8066	22A	2WV MT2	11/06/90	1.033	0.00	> 100.00	0.00	2.50
8067	22A	2XG CEM	11/06/90	1.155	0.00	14.10	0.00	6.50
8067	22A	2WM MT2	11/06/90	1.196	0.00	12.70	0.00	1.58
8068	22A	2XG CEM	11/06/90	1.155	0.00	> 100.00	0.00	3.93
8068	22A	2WM MT2	11/06/90	1.196	0.00	> 100.00	0.00	1.75
8069	22A	224 CEM	11/07/90	1.249	0.00	11.70	0.00	0.00
8069	22A	2YT MT2	11/07/90	1.202	0.00	17.10	0.00	0.80
8070	22A	224 CEM	11/07/90	1.249	0.00	> 100.00	0.00	0.00
8070	22A	2YT MT2	11/07/90	1.202	0.00	> 100.00	0.00	1.40
8071	22A	225 CEM	11/07/90	1.360	0.00	> 100.00	0.00	0.00
8071	22A	2YT MT2	11/07/90	1.230	0.00	> 100.00	0.00	1.10
8072	22A	225 CEM	11/07/90	1.360	0.00	> 100.00	0.00	0.00
8072	22A	2YT MT2	11/07/90	1.230	0.00	> 100.00	0.00	1.10
8073	22A	226 CEM	11/07/90	1.102	0.00	> 100.00	0.00	0.40
8073	22A	2YL MT2	11/07/90	1.230	0.00	> 100.00	0.00	1.10
8074	22A	226 CEM	11/07/90	1.102	0.00	> 100.00	0.00	0.00
8074	22A	2YL MT2	11/07/90	1.230	0.00	> 100.00	0.00	1.22
8075	22A	227 CEM	11/07/90	1.403	0.00	27.90	0.00	0.00
8075	22A	2WM MT2	11/07/90	1.253	0.00	49.90	0.00	2.42
8076	22A	227 CEM	11/07/90	1.403	0.00	90.30	0.00	1.47
8076	22A	2YM MT2	11/07/90	1.253	0.00	> 100.00	0.00	1.61
8077	22A	228 CEM	11/07/90	1.198	0.00	60.80	0.00	0.12
8077	22A	2YM MT2	11/07/90	1.206	0.00	> 100.00	0.00	1.59
8078	22A	228 CEM	11/07/90	1.198	0.00	> 100.00	0.00	0.04
8078	22A	2YM MT2	11/07/90	1.206	0.00	> 100.00	0.00	0.10
8079	22A	229 CEM	11/07/90	1.066	0.00	45.90	0.00	0.00

## Cumulative Summary (cont'd)

AVB	Ship- ment	Pit Cell #	Test Date	Diff- mtl.	TC 50	TC 25	\$1	TAI
8079	22A	ZTO MT2	11/07/90	1.213	0.00	3.06	0.00	0.00
8080	22A	ZTF CEM	11/07/90	1.086	0.00	48.60	0.00	0.00
8080	22A	ZTO MT2	11/07/90	1.213	0.00	100.00	0.00	10.33
8081	22A	22A CEM	11/07/90	1.128	0.00	100.00	0.00	0.00
8081	22A	ZTP MT2	11/07/90	1.229	0.00	100.00	0.00	0.05
8082	22A	22A CEM	11/07/90	1.128	0.00	100.00	0.00	0.00
8082	22A	ZTP MT2	11/07/90	1.229	0.00	100.00	0.00	0.00
8083	22A	ZZB CEM	11/07/90	1.322	0.00	47.10	0.00	0.00
8083	22A	ZTO MT2	11/07/90	1.182	0.00	54.40	0.00	0.58
8084	22A	ZZC CEM	11/07/90	1.322	0.00	95.00	0.00	0.00
8084	22A	ZTO MT2	11/07/90	1.182	0.00	100.00	0.00	2.33
8085	22A	ZZC CEM	11/07/90	1.286	0.00	76.20	0.00	0.05
8085	22A	ZTR MT2	11/07/90	1.239	0.00	100.00	0.00	1.10
8086	22A	ZZC CEM	11/07/90	1.286	0.00	8.68	0.00	0.00
8086	22A	ZTR MT2	11/07/90	1.239	0.00	9.50	0.00	0.00
8087	22A	ZZD CEM	11/07/90	1.332	0.00	88.20	0.00	0.00
8087	22A	ZTS MT2	11/07/90	1.202	0.00	24.50	0.00	0.64
8088	22A	ZZD CEM	11/07/90	1.332	0.00	0.30	0.00	0.00
8088	22A	ZTS MT2	11/07/90	1.202	0.00	47.80	0.00	0.00
8089	22A	ZZE CEM	11/07/90	1.251	0.00	66.00	0.00	0.00
8089	22A	ZYT MT2	11/07/90	1.207	0.00	100.00	0.00	0.02
8090	22A	ZZE CEM	11/07/90	1.251	0.00	50.50	0.00	0.00
8090	22A	ZYT MT2	11/07/90	1.207	0.00	51.80	0.00	0.50
8091	22A	ZZF CEM	11/07/90	1.242	0.00	15.00	0.00	0.00
8091	22A	ZTU MT2	11/07/90	1.215	0.00	5.14	0.00	0.00
8092	22A	ZFF CEM	11/07/90	1.242	0.00	51.90	0.00	0.00
8092	22A	ZTU MT2	11/07/90	1.215	0.00	61.80	0.00	0.00
8093	22A	ZZG CEM	11/07/90	1.323	0.00	69.10	0.00	0.00
8093	22A	ZTV MT2	11/07/90	1.188	0.00	100.00	0.00	0.32
8094	22A	ZZG CEM	11/07/90	1.323	0.00	100.00	0.00	0.00
8094	22A	ZTV MT2	11/07/90	1.188	0.00	100.00	0.00	0.00
8095	22A	ZZH CEM	11/07/90	1.346	0.00	54.70	0.00	0.00
8095	22A	ZTW MT2	11/07/90	1.158	0.00	100.00	0.00	1.63
8096	22A	ZZH CEM	11/07/90	1.346	0.00	100.00	0.00	0.00
8096	22A	ZTW MT2	11/07/90	1.158	0.00	100.00	0.00	0.00
8097	22A	ZZI CEM	11/07/90	1.378	0.00	51.70	0.00	0.00
8097	22A	ZTX MT2	11/07/90	1.125	0.00	21.00	0.00	0.00
8098	22A	ZZI CEM	11/07/90	1.378	0.00	5.79	0.00	0.41
8098	22A	ZYX MT2	11/07/90	1.125	0.00	43.30	0.00	0.00
8099	22A	ZJJ CEM	11/07/90	1.271	0.00	100.00	0.00	0.00
8099	22A	ZYY MT2	11/07/90	1.168	0.00	100.00	0.00	1.25
8100	22A	ZJJ CEM	11/07/90	1.271	0.00	100.00	0.00	0.00
8100	22A	ZYY MT2	11/07/90	1.168	0.00	100.00	0.00	0.31
8101	22A	ZZX CEM	11/07/90	1.230	0.00	0.28	0.00	0.00
8101	22A	ZYY MT2	11/07/90	1.150	0.00	100.00	0.00	0.60
8102	22A	ZZX CEM	11/07/90	1.230	0.00	85.10	0.00	0.00
8102	22A	ZYY MT2	11/07/90	1.150	0.00	19.60	0.00	0.00
8103	22A	ZZL CEM	11/07/90	1.345	0.00	100.00	0.00	0.00
8103	22A	ZZO MT2	11/07/90	1.038	0.00	100.00	0.00	0.15
8104	22A	ZZL CEM	11/07/90	1.345	0.00	100.00	0.00	1.35
8104	22A	ZZO MT2	11/07/90	1.038	0.00	100.00	0.00	0.00
8105	22A	ZZM CEM	11/07/90	1.233	0.00	4.20	0.00	0.00
8105	22A	ZZI MT2	11/07/90	1.150	0.00	6.82	0.00	0.00
8106	22A	ZZM CEM	11/07/90	1.233	0.00	4.69	0.00	0.00
8106	22A	ZZI MT2	11/07/90	1.150	0.00	4.05	0.00	0.00
8107	22A	Z13 CEM	11/08/90	1.218	0.00	29.40	0.00	0.00
8107	22A	Z01 MT2	11/08/90	1.110	0.00	100.00	0.00	0.60
8108	22A	Z13 CEM	11/08/90	1.218	0.00	6.32	0.00	0.00
8108	22A	Z01 MT2	11/08/90	1.110	0.00	11.10	0.00	0.30
8109	22A	Z14 CEM	11/08/90	1.095	0.00	16.50	0.00	1.54
8109	22A	Z0J MT2	11/08/90	1.095	0.00	15.60	0.00	0.30
8110	22A	Z14 CEM	11/08/90	1.095	0.00	100.00	0.00	2.45
8110	22A	Z0J MT2	11/08/90	1.095	0.00	100.00	0.00	2.50
8111	22A	Z15 CEM	11/08/90	1.309	0.00	49.00	0.00	0.00
8111	22A	Z0K MT2	11/08/90	1.089	0.00	100.00	0.00	0.00
8112	22A	Z15 CEM	11/08/90	1.309	0.00	10.80	0.00	0.00
8112	22A	Z0K MT2	11/08/90	1.089	0.00	49.00	0.00	0.21
8113	22A	Z16 CEM	11/08/90	1.290	0.00	15.80	0.00	0.01
8113	22A	Z0L MT2	11/08/90	1.083	0.00	49.00	0.00	0.81
8114	22A	Z16 CEM	11/08/90	1.290	0.00	100.00	0.00	0.80
8114	22A	Z0L MT2	11/08/90	1.083	0.00	100.00	0.00	0.00
8115	22A	Z17 CEM	11/08/90	1.229	0.00	100.00	0.00	1.50
8115	22A	Z0M MT2	11/08/90	1.190	0.00	100.00	0.00	1.00
8116	22A	Z17 CEM	11/08/90	1.229	0.00	49.30	0.00	1.00
8116	22A	Z0M MT2	11/08/90	1.190	0.00	51.80	0.00	0.72
8117	22A	Z18 CEM	11/08/90	1.416	0.00	24.70	0.00	0.00
8117	22A	Z0M MT2	11/08/90	1.198	0.00	51.10	0.00	0.10
8118	22A	Z18 CEM	11/08/90	1.416	0.00	11.30	0.00	0.00

## Comparative Summary (cont'd)

AVN	Ship-	Pit Call	Test	Diff-	IC 50	TC 25	SI	TAI
No.	ment	# Line	Date	mtl.				
8118	22A	30W MT2	11/08/90	1.198	0.00	15.60	0.00 >	0.48
8119	22A	319 CEM	11/08/90	1.126	0.00	15.30	0.00 >	0.45
8119	22A	300 MT2	11/08/90	1.145	0.00	10.30	0.00	0.31
8120	22A	319 CEM	11/08/90	1.126	0.00	19.70	0.00	0.68
8120	22A	300 MT2	11/08/90	1.145	0.00	55.00	0.00	0.88
8121	22A	31A CEM	11/08/90	1.266	0.00 >	100.00	0.00 >	0.46
8121	22A	30P MT2	11/08/90	1.165	0.00 >	100.00	0.00	0.80
8122	22A	31A CEM	11/08/90	1.266	0.00	27.10	0.00	0.88
8122	22A	30P MT2	11/08/90	1.165	0.00	49.00	0.00	0.00
8123	22A	31B CEM	11/08/90	1.374	0.00	22.10	0.00	0.00
8123	22A	30B MT2	11/08/90	1.159	0.00	49.70	0.00	0.21
8124	22A	31B CEM	11/08/90	1.374	0.00	44.90	0.00	0.00
8124	22A	30B MT2	11/08/90	1.159	0.00	49.30	0.00 >	0.31
8125	22A	31C CEM	11/08/90	1.412	0.00	12.40	0.00	0.00
8125	22A	30B MT2	11/08/90	1.175	0.00	49.90	0.00	0.00
8126	22A	31C CEM	11/08/90	1.412	0.00	40.50	0.00	0.00
8126	22A	30B MT2	11/08/90	1.175	0.00	50.10	0.00	0.00
8127	22A	31D CEM	11/08/90	1.449	0.00	25.30	0.00	0.00
8127	22A	30B MT2	11/08/90	1.146	0.00	18.70	0.00 >	0.29
8128	22A	31D CEM	11/08/90	1.449	0.00	19.70	0.00	0.00
8128	22A	30B MT2	11/08/90	1.146	0.00	17.00	0.00	0.00
8129	22A	31E CEM	11/08/90	1.247	0.00	5.89	0.00 >	0.12
8129	22A	30T MT2	11/08/90	1.171	0.00	5.20	0.00	0.00
8130	22A	31E CEM	11/08/90	1.247	0.00	5.62	0.00	0.00
8130	22A	30T MT2	11/08/90	1.171	0.00	5.56	0.00	0.00
8131	22A	31F CEM	11/08/90	1.116	0.00	43.80	0.00	0.00
8131	22A	30U MT2	11/08/90	1.154	0.00	16.30	0.00	0.31
8132	22A	31F CEM	11/08/90	1.116	0.00 >	100.00	0.00	0.40
8132	22A	30U MT2	11/08/90	1.154	0.00 >	100.00	0.00	0.00
8133	22A	31G CEM	11/08/90	1.345	0.00	38.90	0.00	0.00
8133	22A	30V MT2	11/08/90	1.188	0.00	49.90	0.00	0.00
8134	22A	31G CEM	11/08/90	1.344	0.00	5.80	0.00	0.00
8134	22A	30V MT2	11/08/90	1.188	0.00	5.09	0.00 >	0.30
8135	22A	31H CEM	11/08/90	1.191	0.00	4.22	0.00 >	0.05
8135	22A	30W MT2	11/08/90	1.191	0.00	5.07	0.00	0.21
8136	22A	31H CEM	11/08/90	1.191	0.00	0.37	0.00	0.00
8136	22A	36M CEM	11/20/90	0.817	0.00	0.53	0.00 >	0.41
8136	22A	30W MT2	11/08/90	1.191	0.00	0.57	0.00	0.00
8136	22A	367 MT2	11/20/90	0.849	0.00	0.55	0.00 >	11.00
8137	22A	31I CEM	11/08/90	1.398	0.00	49.90	0.00	1.02
8137	22A	30X MT2	11/08/90	1.158	32.00 >	100.00	3.13 >	24.68
8137	22A	368 MT2	11/20/90	0.865	20.70	157.00	7.57 >	38.65
8138	22A	31J CEM	11/08/90	1.398	0.00	33.40	0.00	0.00
8138	22A	30X MT2	11/08/90	1.158	0.00	19.30	0.00	0.00
8139	22A	31J CEM	11/08/90	1.294	0.00	1.67	0.00	0.00
8139	22A	30Y MT2	11/08/90	1.185	0.00	4.93	0.00	0.00
8140	22A	31J CEM	11/08/90	1.294	0.00	8.04	0.00	0.00
8140	22A	30Y MT2	11/08/90	1.185	0.00	5.13	0.00	1.03
8141	22A	31K CEM	11/08/90	1.392	0.00 >	100.00	0.00 >	6.92
8141	22A	30Z MT2	11/08/90	1.137	52.00 >	100.00	1.92 >	12.72
8141	22A	368 MT2	11/20/90	0.865	118.00	490.00	4.17 >	33.91
8142	22A	31K CEM	11/08/90	1.392	0.00	49.90	0.00	0.00
8142	22A	30Z MT2	11/08/90	1.137	0.00	49.20	0.00	0.67
8143	22A	31L CEM	11/08/90	1.194	0.00 >	100.00	0.00	0.00
8143	22A	31O MT2	11/08/90	1.155	0.00 >	100.00	0.00	0.00
8144	22A	31L CEM	11/08/90	1.194	0.00 >	100.00	0.00	0.00
8144	22A	31O MT2	11/08/90	1.155	0.00 >	100.00	0.00	0.00
8145	22A	33E CEM	11/09/90	1.116	5.59	29.30	5.23 >	23.26
8145	22A	360 CEM	11/20/90	0.984	0.00	45.90	0.20 >	0.04
8145	22A	32U MT2	11/09/90	1.255	0.00	55.00	0.00	0.50
8146	22A	33E CEM	11/09/90	1.116	0.00	15.80	0.00	0.00
8146	22A	32U MT2	11/09/90	1.255	0.00 >	100.00	0.00 >	1.20
8147	22A	33F CEM	11/09/90	1.286	0.00	9.24	0.00	0.00
8147	22A	32Y MT2	11/09/90	1.199	0.00	48.60	0.00 >	4.42
8148	22A	33P CEM	11/09/90	1.286	0.00	23.00	0.00	1.40
8148	22A	32Y MT2	11/09/90	1.199	0.33	35.50	0.20 >	1.24
8149	22A	33G CEM	11/09/90	1.266	0.00	7.03	0.00	0.49
8149	22A	32Y MT2	11/09/90	1.224	0.00	5.82	0.00 >	1.22
8150	22A	33G CEM	11/09/90	1.266	0.00	5.24	0.00 >	0.22
8150	22A	32Y MT2	11/09/90	1.224	0.00	5.82	0.00 >	1.32
8151	22A	33H CEM	11/09/90	1.337	0.00	12.60	0.00 >	0.03
8151	22A	32Y MT2	11/09/90	1.186	0.00	6.41	0.00	0.13
8152	22A	33H CEM	11/09/90	1.337	0.00	13.10	0.00 >	0.10
8152	22A	32Y MT2	11/09/90	1.186	0.00	17.10	0.00 >	0.22
8153	22A	33I CEM	11/09/90	1.173	0.00	14.50	0.00	0.43
8153	22A	32Y MT2	11/09/90	1.171	0.00	16.90	0.00 >	2.32
8154	22A	33J CEM	11/09/90	1.173	0.00	1.24	0.00 >	0.95
8154	22A	32Y MT2	11/09/90	1.171	0.00	0.50	0.00 >	0.00

## Cumulative Summary (cont'd)

AV#	Ship- ment	Flt	Cell #	Test Date	Diff- mtl.	IC 50	IC 25	SI	TAI
8155	22A	33J	CEM	11/09/90	1.284	0.00	27.80	0.00 >	0.28
8155	22A	32Z	HT2	11/09/90	1.194	0.00	21.50	0.00	0.74
8156	22A	33J	CEM	11/09/90	1.284	0.00	26.10	0.00 >	1.10
8156	22A	32Z	HT2	11/09/90	1.194	0.00	20.40	0.00	0.00
8157	22A	33J	CEM	11/09/90	1.240	0.00	12.10	0.00 >	0.01
8157	22A	33O	HT2	11/09/90	1.182	0.00	18.70	0.00	0.00
8158	22A	33K	CEM	11/09/90	1.240	0.00	23.20	0.00	0.06
8158	22A	33O	HT2	11/09/90	1.182	0.00	48.20	0.00	0.10
8159	22A	33L	CEM	11/09/90	1.128	0.00	74.50	0.00	0.00
8159	22A	33I	HT2	11/09/90	1.185	0.00 >	100.00	0.00 >	0.56
8160	22A	33I	CEM	11/09/90	1.128	0.00	61.60	0.00	3.90
8160	22A	33I	HT2	11/09/90	1.185	0.00 >	100.00	0.00 >	1.50
8161	22A	33M	CEM	11/09/90	1.166	0.00	74.50	0.00 >	2.96
8161	22A	33Z	HT2	11/09/90	1.210	0.00 >	100.00	0.00 >	2.20
8162	22A	33M	CEM	11/09/90	1.166	0.00 >	100.00	0.00 >	1.57
8162	22A	33Z	HT2	11/09/90	1.210	0.00 >	100.00	0.00 >	0.97
8163	22A	334	CEM	11/09/90	0.969	0.00 >	100.00	0.00	1.39
8163	22A	333	HT2	11/09/90	1.136	0.00 >	100.00	0.00 >	1.70
8164	22A	334	CEM	11/09/90	0.969	0.00	78.90	0.00	1.21
8164	22A	333	HT2	11/09/90	1.134	0.00 >	100.00	0.00	0.00
8165	22A	33G	CEM	11/09/90	1.066	0.00	100.00	0.00 >	6.31
8165	22A	334	HT2	11/09/90	1.163	0.00	100.00	0.00 >	4.40
8166	22A	33G	CEM	11/09/90	1.046	0.00	100.00	0.00 >	8.92
8166	22A	334	HT2	11/09/90	1.163	0.00 >	100.00	0.00 >	1.70
8167	22A	334	CEM	11/09/90	1.286	0.00	66.00	0.00 >	0.19
8167	22A	335	HT2	11/09/90	1.152	0.00 >	100.00	0.00 >	0.67
8168	22A	33B	CEM	11/09/90	1.286	0.00	14.80	0.00 >	2.06
8168	22A	335	HT2	11/09/90	1.152	0.00	21.50	0.00	1.06
8169	22A	339	CEM	11/09/90	1.163	0.00 >	100.00	0.00 >	3.68
8169	22A	336	HT2	11/09/90	1.179	0.00 >	100.00	0.00 >	4.11
8170	22A	330	CEM	11/09/90	1.163	0.00	4.29	0.00 >	0.34
8170	22A	336	HT2	11/09/90	1.179	0.00	7.67	0.00	0.37
8171	22A	334	CEM	11/09/90	1.254	0.00	32.00	0.00	0.00
8171	22A	337	HT2	11/09/90	1.219	0.00 >	100.00	0.00 >	9.31
8172	22A	334	CEM	11/09/90	1.254	0.00	78.20	0.00	1.01
8172	22A	337	HT2	11/09/90	1.219	0.00 >	100.00	0.00 >	5.20
8173	22A	336	CEM	11/09/90	1.322	0.00	100.00	0.00 >	0.20
8173	22A	338	HT2	11/09/90	1.129	0.00 >	100.00	0.00 >	0.75
8174	22A	335	CEM	11/09/90	1.322	0.00 >	100.00	0.00 >	7.01
8174	22A	334	HT2	11/09/90	1.129	0.00 >	100.00	0.00 >	2.57
8175	22A	33T	CEM	11/09/90	1.198	0.00	19.10	0.00	1.61
8175	22A	339	HT2	11/09/90	1.198	0.00	56.30	0.00	0.00
8176	22A	33T	CEM	11/09/90	1.198	0.00 >	100.00	0.00 >	1.49
8176	22A	339	HT2	11/09/90	1.108	0.00 >	100.00	0.00 >	0.65
8177	22A	350	*	11/09/90	1.027	0.00	91.50	0.00	2.36
8177	22A	334	HT2	11/09/90	1.150	0.00 >	100.00	0.00	0.00
8178	22A	350	CEM	11/09/90	1.027	0.00	60.10	0.00	0.30
8178	22A	33A	HT2	11/09/90	1.150	0.00 >	100.00	0.00 >	1.69
8179	22A	33V	CEM	11/09/90	1.227	0.00	60.30	0.00	0.05
8179	22A	334	HT2	11/09/90	1.122	0.00 >	100.00	0.00 >	0.30
8180	22A	35V	CEM	11/09/90	1.227	0.00	18.30	0.00	0.00
8180	22A	334	HT2	11/09/90	1.122	0.00 >	100.00	0.00	0.00
8181	22A	369	CEM	11/20/90	1.061	0.00	69.10	0.00	0.01
8181	22A	369	HT2	11/20/90	0.819	0.00 >	100.00	0.00 >	23.40
8182	22A	334	CEM	11/09/90	1.278	0.00 >	100.00	0.00	0.00
8182	22A	33C	HT2	11/09/90	1.158	0.00 >	100.00	0.00	0.20
8183	22A	344	CEM	11/13/90	0.891	0.00	16.60	0.00	0.00
8183	22A	345	HT2	11/13/90	1.206	0.00	49.00	0.00	0.57
8184	22A	349	CEM	11/13/90	0.891	0.00	48.30	0.00	0.00
8184	22A	345	HT2	11/13/90	1.206	0.00	100.00	0.00	0.00
8185	22A	346	CEM	11/13/90	0.839	0.00 >	100.00	0.00	0.14
8185	22A	346	HT2	11/13/90	1.197	0.00 >	100.00	0.00 >	0.06
8186	22A	346	CEM	11/13/90	0.839	41.70	100.00 >	2.40 >	31.70
8186	22A	346	HT2	11/13/90	1.197	0.00 >	100.00	0.00	0.00
8187	22A	346	CEM	11/13/90	0.831	0.00	79.60	0.00	0.00
8187	22A	347	HT2	11/13/90	1.181	0.00	90.60	0.00	0.00
8188	22A	348	CEM	11/13/90	0.831	0.00 >	100.00	0.00	0.00
8188	22A	347	HT2	11/13/90	1.181	0.00 >	100.00	0.00 >	0.31
8189	22A	348	CEM	11/13/90	0.840	0.00	45.60	0.00	0.00
8189	22A	348	HT2	11/13/90	1.126	0.00 >	100.00	0.00	0.75
8190	22A	348	CEM	11/13/90	0.840	0.00 >	100.00	0.00	0.00
8190	22A	348	HT2	11/13/90	1.126	0.00 >	100.00	0.00 >	0.53
8191	22A	347	CEM	11/13/90	0.874	0.00	18.40	0.00	0.00
8191	22A	349	HT2	11/13/90	1.148	0.00	65.20	0.00	1.03
8192	22A	347	CEM	11/13/90	0.874	0.00 >	100.00	0.00	0.00
8192	22A	349	HT2	11/13/90	1.148	0.00 >	100.00	0.00 >	0.03
8193	22A	344	CEM	11/13/90	0.851	0.00	4.94	0.00	0.00
8193	22A	344	HT2	11/13/90	1.134	0.00	11.20	0.00	0.00

## CUMULATIVE SUMMARY (cont'd)

AVS	Ship-	Pit Cell	Test	Diff-	TC 50	TC 25	SI	TAT
No.	ment	# Line	Date	mtl.				
8194	22A	340 CEM	11/13/90	0.251	0.00 > 100.00	0.00	0.00	
8195	22A	344 NT2	11/13/90	1.136	0.00 > 100.00	0.00	0.11	
8195	22A	349 CEM	11/13/90	0.839	0.00 > 100.00	0.00	0.00	
8195	22A	348 NT2	11/13/90	1.160	0.00 > 100.00	0.00	0.00	
8196	75	348 CEM	12/06/90	0.578	0.00 < 0.32	0.00	0.00	
8196	75	346 NT2	12/06/90	0.663	0.00 < 4.80	0.00	0.00	
8197	75	348 CEM	12/06/90	0.612	0.00 < 28.30	0.00 > 13.37		
8197	75	347 NT2	12/06/90	0.635	0.00 < 15.80	0.00	0.06	
8198	75	348 CEM	12/06/90	0.612	0.00 < 0.16	0.00	12.11	
8198	75	347 NT2	12/06/90	0.635	0.00 < 49.70	0.00	0.70	
8199	75	343 CEM	12/06/90	0.587	0.00 > 100.00	0.00	6.03	
8199	75	348 NT2	12/06/90	0.610	0.00 < 29.60	0.00	0.00	
8200	75	348 CEM	12/06/90	0.587	0.00 < 0.23	0.00	0.00	
8200	75	348 NT2	12/06/90	0.610	0.00 < 53.50	0.00	0.00	
8201	75	347 CEM	12/06/90	0.557	0.00 < 2.49	0.00	1.07	
8201	75	349 NT2	12/06/90	0.642	0.00 < 5.18	0.00 > 0.60		
8202	75	347 CEM	12/06/90	0.637	2.17 < 0.18	0.00 > 38.22		
8202	75	349 NT2	12/06/90	0.642	1.44 < 14.90	10.38	31.41	
8203	75	348 CEM	12/06/90	0.545	0.00 < 44.10	0.00	0.00	
8203	75	348 NT2	12/06/90	0.611	0.00 < 50.70	0.00	0.40	
8204	75	349 CEM	12/06/90	0.565	0.00 < 0.17	0.00	0.00	
8204	75	348 NT2	12/06/90	0.611	0.00 < 15.70	0.00	0.52	
8205	75	347 CEM	12/06/90	0.544	25.90 < 65.20	2.51	16.97	
8205	75	348 NT2	12/06/90	0.646	0.00 < 39.40	0.00	0.00	
8206	75	347 CEM	12/06/90	0.544	0.00 < 0.28	0.00 > 18.59		
8206	75	348 NT2	12/06/90	0.646	0.00 < 17.20	0.00	0.59	
8207	75	349 CEM	12/06/90	0.522	0.00 > 100.00	0.00	5.43	
8207	75	348 NT2	12/06/90	0.695	0.00 < 49.70	0.00	0.03	
8208	75	348 CEM	12/06/90	0.522	0.00 < 0.13	0.00	12.17	
8208	75	348 NT2	12/06/90	0.695	0.00 < 18.00	0.00	0.10	
8209	75	348 CEM	12/06/90	0.566	14.90 < 69.00	3.29	> 26.40	
8209	75	348 NT2	12/06/90	0.627	7.82 < 51.80	6.62	> 29.31	
8210	75	348 CEM	12/06/90	0.566	0.00 < 0.14	0.00	10.88	
8210	75	348 NT2	12/06/90	0.627	0.00 < 20.40	0.00	1.05	
8211	75	347 CEM	12/06/90	0.628	0.00 < 14.40	0.00 > 0.59		
8211	75	346 NT2	12/06/90	0.557	0.00 < 5.01	0.00	0.82	
8212	75	347 CEM	12/06/90	0.628	0.00 < 0.13	0.00	0.84	
8212	75	346 NT2	12/06/90	0.557	0.00 < 51.10	0.00	0.00	
8213	75	348 CEM	12/06/90	0.635	0.00 < 49.00	0.00 > 1.49		
8213	75	347 NT2	12/06/90	0.605	0.00 < 49.20	0.00	0.24	
8214	75	342 CEM	12/06/90	0.635	0.00 < 0.11	0.00	0.14	
8214	75	347 NT2	12/06/90	0.605	0.00 < 49.90	0.00	0.00	
8215	75	340 CEM	12/06/90	0.534	0.00 > 100.00	0.00 > 13.61		
8215	75	346 NT2	12/06/90	0.466	0.00 < 19.80	0.00 > 3.10		
8216	75	340 CEM	12/06/90	0.534	20.30 < 0.14	0.00 > 21.67		
8216	75	346 NT2	12/06/90	0.466	0.00 < 67.40	0.00	15.10	
8217	75	341 CEM	12/06/90	0.586	0.00 < 53.80	0.00 > 11.99		
8217	75	348 NT2	12/06/90	0.593	0.00 < 49.50	0.00	0.43	
8218	75	341 CEM	12/06/90	0.596	0.00 < 0.17	0.00	11.98	
8218	75	344 NT2	12/06/90	0.593	0.00 < 50.50	0.00	0.00	
8219	75	342 CEM	12/06/90	0.533	0.00 < 15.90	0.00 > 0.60		
8219	75	341 NT2	12/06/90	0.645	0.00 < 49.00	0.00	2.31	
8220	75	342 CEM	12/06/90	0.533	0.00 < 0.08	0.00	1.99	
8220	75	341 NT2	12/06/90	0.645	0.00 < 18.10	0.00	0.00	
8221	75	343 CEM	12/06/90	0.485	0.00 < 0.32	0.00	0.00	
8221	75	343 NT2	12/06/90	0.521	0.00 < 1.55	0.00	0.00	
8222	75	343 CEM	12/06/90	0.485	0.00 < 0.14	0.00	3.06	
8222	75	343 NT2	12/06/90	0.521	0.00 < 27.20	0.00	0.00	
8223	75	344 CEM	12/06/90	0.540	0.00 < 35.00	0.00 > 2.24		
8223	75	348 NT2	12/06/90	0.519	0.00 < 41.50	0.00	0.00	
8224	75	344 CEM	12/06/90	0.540	0.00 < 0.08	0.00	3.87	
8224	75	344 NT2	12/06/90	0.519	0.00 < 25.30	0.00	0.70	
8225	75	345 CEM	12/06/90	0.523	0.00 < 31.20	70.96	> 50.00	
8225	75	344 NT2	12/06/90	0.525	1.34 < 5.78	4.38	> 21.30	
8226	75	345 CEM	12/06/90	0.523	5.70 < 0.15	0.03	22.28	
8226	75	344 NT2	12/06/90	0.525	0.00 < 25.70	0.00	0.00	
8227	75	347 CEM	12/11/90	1.182	0.00 < 15.20	0.00	0.00	
8227	75	349 NT2	12/11/90	1.057	0.00 < 44.00	0.00	0.00	
8228	75	347 CEM	12/11/90	1.162	0.00 < 0.18	0.00	0.00	
8228	75	349 NT2	12/11/90	1.057	0.00 < 15.70	0.00	2.42	
8229	75	340 CEM	12/11/90	1.321	0.00 < 29.00	0.00 > 0.05		
8229	75	344 NT2	12/11/90	1.111	0.00 < 49.50	0.00 > 2.02		
8229	75	340 CEM	12/11/90	1.321	0.00 < 0.20	0.00	0.23	
8230	75	344 NT2	12/11/90	1.111	0.00 < 16.70	0.00	0.00	
8231	75	347 CEM	12/11/90	1.249	0.00 < 5.50	0.00 > 2.16		
8231	75	349 NT2	12/11/90	1.047	0.00 < 5.57	0.00	0.13	
8232	75	347 CEM	12/11/90	1.249	0.00 < 0.32	0.00	0.00	
8232	75	349 NT2	12/11/90	1.047	0.00 < 1.60	0.00	0.10	

## Cumulative Summary (cont'd)

AVB No.	Ship/ MFR	Pit Cell #	Test Date	Diff- mtl.	IC 50	TC 25	SI	TAI
8233	75	302 CEM	12/11/90	1.253	0.00	25.10	0.00	> 5.21
8233	75	302 HT2	12/11/90	0.855	0.91	66.00	13.45	> 56.06
8234	75	302 CEM	12/11/90	1.253	< 0.32	6.60	> 20.33	> 48.31
8234	75	302 HT2	12/11/90	0.855	< 0.32	1.60	> 5.24	> 26.27
8235	75	302 CEM	12/11/90	1.155	4.15	35.80	8.64	> 39.94
8235	75	302 HT2	12/11/90	1.039	4.58	65.50	14.25	> 44.44
8236	75	302 CEM	12/11/90	1.155	0.42	0.26	0.62	> 72.27
8236	75	302 HT2	12/11/90	1.039	0.50	0.20	27.78	> 54.01
8237	75	302 CEM	12/11/90	1.324	5.53	9.48	1.71	> 24.60
8237	75	302 HT2	12/11/90	0.973	1.60	50.90	36.28	> 58.03
8238	75	302 CEM	12/11/90	0.973	0.00	32.00	0.00	> 2.94
8239	75	302 CEM	12/11/90	1.313	0.00	< 0.32	0.00	> 0.00
8239	75	302 HT2	12/11/90	1.062	0.00	11.40	0.00	> 7.24
8240	75	302 CEM	12/11/90	1.313	17.10	29.50	1.71	> 8.14
8240	75	302 HT2	12/11/90	1.062	0.00	18.70	0.00	> 9.38
8241	75	302 CEM	12/11/90	1.271	0.00	28.00	0.00	> 5.11
8241	75	302 HT2	12/11/90	1.061	0.00	15.70	0.00	> 1.63
8242	75	302 CEM	12/11/90	1.271	0.00	0.18	0.00	> 0.96
8242	75	302 HT2	12/11/90	1.061	0.00	15.70	0.00	> 0.43
8243	76	302 CEM	12/20/90	1.207	0.00	66.00	0.00	> 2.32
8243	76	302 HT2	01/17/91	0.515	0.00	> 100.00	0.00	> 0.77
8244	76	302 CEM	12/20/90	1.120	0.00	> 100.00	0.00	> 0.43
8244	76	302 HT2	01/17/91	1.207	0.00	70.90	0.00	> 0.64
8244	76	302 CEM	01/17/91	0.515	0.00	> 100.00	0.00	> 0.00
8244	76	302 HT2	01/17/91	1.120	0.00	> 100.00	0.00	> 0.12
8245	76	302 CEM	12/20/90	1.391	0.00	131.80	0.00	> 0.00
8245	76	302 HT2	01/17/91	0.614	0.00	> 100.00	0.00	> 0.41
8245	76	302 CEM	01/17/91	1.182	0.00	> 100.00	0.00	> 0.00
8246	76	302 HT2	12/20/90	1.391	0.00	7.92	0.00	> 0.14
8246	76	302 CEM	01/17/91	0.614	27.10	49.50	1.83	> 12.06
8246	76	302 HT2	01/17/91	1.182	0.00	15.20	0.00	> 0.00
8247	76	302 CEM	12/20/90	1.529	0.00	3.20	0.00	> 0.02
8247	76	302 HT2	01/17/91	0.618	100.00	> 100.00	> 1.00	> 13.51
8247	76	302 CEM	01/17/91	1.093	0.00	54.70	0.00	> 0.00
8248	76	302 HT2	12/20/90	1.529	0.00	84.40	0.00	> 3.80
8248	76	302 CEM	01/17/91	0.618	0.00	> 100.00	0.00	> 6.02
8248	76	302 HT2	01/17/91	1.093	0.00	> 100.00	0.00	> 0.20
8249	76	302 CEM	12/20/90	1.471	0.00	154.00	0.00	> 0.91
8249	76	302 HT2	01/17/91	0.582	0.00	> 100.00	0.00	> 18.93
8249	76	302 CEM	01/17/91	1.092	0.00	> 100.00	0.00	> 10.01
8250	76	302 HT2	12/20/90	1.471	0.00	198.00	0.00	> 0.19
8250	76	302 CEM	01/17/91	0.582	0.00	> 100.00	0.00	> 0.35
8250	76	302 HT2	01/17/91	1.092	0.00	23.10	0.00	> 0.21
8251	76	302 CEM	12/20/90	1.486	0.00	252.00	0.00	> 0.00
8251	76	302 HT2	01/17/91	1.194	0.00	75.60	0.00	> 0.33
8252	76	302 CEM	12/20/90	1.486	0.00	265.00	0.00	> 0.00
8252	76	302 HT2	01/17/91	1.194	0.00	> 100.00	0.00	> 0.08
8253	76	302 CEM	12/20/90	1.160	0.00	490.00	0.00	> 9.15
8253	76	302 HT2	01/17/91	1.121	0.00	> 100.00	0.00	> 0.48
8254	76	302 CEM	12/20/90	1.160	0.00	781.00	0.00	> 19.86
8254	76	302 HT2	01/17/91	1.121	0.00	> 100.00	0.00	> 0.37
8255	76	302 CEM	12/20/90	1.397	0.00	46.00	0.00	> 0.00
8255	76	302 HT2	01/17/91	0.578	5.44	> 100.00	> 17.68	> 34.79
8255	76	302 CEM	01/17/91	1.057	0.00	> 100.00	0.00	> 0.18
8256	76	302 HT2	12/20/90	1.397	159.00	634.00	3.98	> 21.04
8256	76	302 CEM	01/17/91	0.578	12.70	> 100.00	> 7.84	> 47.07
8256	76	302 HT2	01/17/91	1.057	0.00	> 100.00	0.00	> 1.49
8257	76	302 CEM	12/20/90	1.045	15.70	268.00	55.34	> 68.17
8257	76	302 HT2	01/17/91	0.562	25.50	0.13	0.00	> 15.88
8257	76	302 CEM	01/17/91	1.076	31.10	> 100.00	> 3.21	> 20.82
8258	76	302 HT2	12/20/90	1.045	119.00	> 1000.0	> 8.42	> 35.27
8258	76	302 CEM	01/17/91	0.562	67.70	100.00	1.48	> 3.74
8258	76	302 HT2	01/17/91	1.076	83.40	> 100.00	> 1.20	> 8.66
8259	76	302 CEM	12/20/90	1.167	8.27	> 1000.0	> 120.91	> 73.07
8259	76	302 HT2	01/17/91	0.562	16.30	> 100.00	> 6.15	> 32.76
8259	76	302 CEM	01/17/91	1.009	16.00	> 100.00	> 6.25	> 34.17
8260	76	302 HT2	12/20/90	1.167	11.40	> 1000.0	> 87.88	> 75.77
8260	76	302 CEM	01/17/91	0.562	15.80	> 100.00	> 6.30	> 8.51
8260	76	302 HT2	01/17/91	1.009	12.50	> 100.00	> 8.11	> 37.28
8261	76	302 CEM	12/20/90	1.160	5.95	192.00	32.23	> 55.11
8261	76	302 HT2	01/17/91	0.717	16.50	> 100.00	> 6.15	> 31.32
8261	76	302 CEM	01/17/91	1.004	14.70	> 100.00	> 6.79	> 31.10
8262	76	302 HT2	12/20/90	1.160	90.20	169.00	1.87	> 15.13
8262	76	302 CEM	01/17/91	0.717	28.10	> 100.00	> 1.13	> 4.63
8262	76	302 HT2	01/17/91	1.004	0.00	57.10	0.00	> 0.00
8263	76	302 CEM	12/20/90	0.985	0.00	32.00	0.00	> 0.50
8263	76	302 HT2	01/17/91	0.644	0.00	75.30	0.00	0.00

## Cumulative Summary (cont'd)

AVS	Ship- No.	Pit Cell # Line	Test Date	Diff- mtl.	TC 50	TC 25	\$1	TAC
8243	76	3MC NT2	01/17/91	1.015	0.00	53.20	0.00	0.00
8244	76	3FX CEM	12/20/90	0.983	0.00	169.00	0.00	0.91
8244	76	3MC CEM	01/17/91	0.644	0.00	> 100.00	0.00	0.00
8244	76	3MC NT2	01/17/91	1.015	0.00	53.40	0.00	0.12
8245	76	3FY CEM	12/20/90	0.981	0.00	49.00	0.00	0.00
8245	76	3MC NT2	01/17/91	0.988	0.00	43.20	0.00	0.00
8246	76	3FY CEM	12/20/90	0.981	0.00	274.00	0.00	4.31
8246	76	3MC CEM	01/17/91	0.541	0.00	56.30	0.00	0.53
8246	76	3MC NT2	01/17/91	0.998	0.00	97.40	0.00	0.00
8247	76	3FZ CEM	12/20/90	1.141	0.00	114.00	0.00	4.42
8247	76	3MT CEM	01/17/91	0.649	0.00	> 100.00	0.00	0.00
8247	76	3X1 NT2	12/20/90	1.044	0.00	< 3.20	0.00	0.00
8247	76	3MC NT2	01/17/91	1.093	0.00	27.40	0.00	0.00
8248	76	3MT CEM	01/17/91	0.449	0.00	> 100.00	0.00	0.00
8248	76	3MC NT2	01/17/91	1.093	0.00	21.00	0.00	0.00
8249	76	3MU CEM	01/17/91	0.488	0.00	> 100.00	0.00	0.00
8249	76	3MF NT2	01/17/91	0.952	0.00	> 100.00	0.00	2.59
8250	76	3MU CEM	01/17/91	0.488	0.00	> 100.00	0.00	0.00
8250	76	3MF NT2	01/17/91	0.952	0.00	> 100.00	0.00	0.30
8251	76	3MU CEM	01/18/91	1.152	0.00	> 100.00	0.00	0.00
8251	76	3MC NT2	01/18/91	1.440	0.00	9.32	0.00	0.07
8252	76	3MC CEM	01/18/91	1.152	50.70	> 0.00	0.00	> 10.90
8252	76	3MC NT2	01/18/91	1.440	19.40	> 100.00	0.16	> 24.31
8253	76	3MC CEM	01/18/91	1.005	0.00	6.53	0.00	0.00
8253	76	3MC NT2	01/18/91	1.293	0.00	2.94	0.00	0.00
8254	76	3MC CEM	01/18/91	1.005	0.00	> 100.00	0.00	0.13
8254	76	3MC NT2	01/18/91	1.293	0.00	44.40	0.00	0.00
8255	76	22I CEM	11/07/90	1.362	12.10	10.00	0.82	> 16.10
8255	76	22I CEM	11/07/90	1.362	0.00	> 0.10	0.00	0.00
8256	76	2Y9 NT2	10/26/90	0.799	1.58	47.80	28.51	> 44.65
8256	76	2Y5 NT2	10/26/90	0.799	0.00	> 0.10	0.00	0.15
8259	76	3MC CEM	01/18/91	1.020	0.00	> 100.00	0.00	> 5.70
8259	76	3MT NT2	01/18/91	1.359	0.00	> 100.00	0.00	0.22
8260	76	3MC CEM	01/18/91	1.320	0.00	> 100.00	0.00	> 1.34
8260	76	3MT NT2	01/18/91	1.359	0.00	44.10	0.00	0.00
8261	76	3MU CEM	01/18/91	1.216	50.70	> 100.00	1.97	> 8.72
8261	76	3MCZ NT2	01/18/91	1.347	0.00	37.40	0.00	0.59
8262	76	3MC CEM	01/18/91	1.216	0.00	40.50	0.00	> 0.40
8262	76	3MCZ NT2	01/18/91	1.347	0.00	> 100.00	0.00	0.00
8263	76	3MC CEM	01/18/91	0.937	0.00	> 100.00	0.00	0.00
8263	76	3MC NT2	01/18/91	1.295	0.00	> 100.00	0.00	> 0.02
8264	76	3MC CEM	01/18/91	0.937	0.00	> 100.00	0.00	0.00
8264	76	3MC NT2	01/18/91	1.295	0.00	> 100.00	0.00	0.17
8265	76	3MC CEM	01/18/91	1.045	0.00	> 100.00	0.00	0.00
8265	76	3MC NT2	01/18/91	1.241	0.00	69.00	0.00	> 1.27
8266	76	3MC CEM	01/18/91	1.045	0.00	> 100.00	0.00	0.00
8266	76	3MC NT2	01/18/91	1.241	0.00	> 100.00	0.00	> 0.10
8267	76	3MC CEM	01/18/91	1.224	0.00	40.50	0.00	0.00
8267	76	3MCZ NT2	01/18/91	1.298	0.00	2.83	0.00	0.00
8268	76	3MC CEM	01/18/91	1.224	0.00	92.00	0.00	0.00
8268	76	3MCZ NT2	01/18/91	1.298	0.00	31.00	0.00	> 1.20
8269	76	3MC CEM	01/18/91	1.073	0.00	> 100.00	0.00	> 0.01
8269	76	3MCZ NT2	01/18/91	1.200	0.00	> 100.00	0.00	0.99
8270	76	3MC CEM	01/18/91	1.073	0.00	> 100.00	0.00	0.00
8270	76	3MCZ NT2	01/18/91	1.200	0.00	> 100.00	0.00	0.00
8271	76	3MC CEM	01/18/91	0.994	0.00	> 100.00	0.00	0.00
8271	76	3MC NT2	01/18/91	1.204	0.00	> 100.00	0.00	> 0.05
8272	76	3MC CEM	01/18/91	1.096	0.00	> 100.00	0.00	> 3.17
8272	76	3MC NT2	01/18/91	1.204	0.00	0.20	0.00	0.28
8273	76	3MC CEM	01/18/91	1.099	0.00	> 100.00	0.00	> 3.84
8273	76	3MC NT2	01/18/91	1.139	0.00	> 100.00	0.00	0.00
8274	76	3MC CEM	01/18/91	1.089	0.00	> 100.00	0.00	0.00
8274	76	3MC NT2	01/18/91	1.139	0.00	76.00	0.00	0.00
8275	76	3MC CEM	01/18/91	1.125	0.00	74.50	0.00	0.00
8275	76	3MC NT2	01/18/91	1.196	0.00	> 100.00	0.00	0.32
8276	76	3MC CEM	01/18/91	1.125	32.20	0.00	2.52	> 23.39
8276	76	3MCZ NT2	01/18/91	1.196	21.40	> 100.00	4.48	> 24.65
8277	76	3MC CEM	01/18/91	1.126	0.00	84.40	0.00	0.00
8277	76	3MCZ NT2	01/18/91	1.247	0.00	> 100.00	0.00	0.00
8278	76	3MC CEM	01/18/91	1.126	0.00	> 100.00	0.00	0.00
8278	76	3MCZ NT2	01/18/91	1.247	0.00	52.50	0.00	0.01
8279	76	3MC CEM	01/18/91	1.008	0.00	> 100.00	0.00	> 3.50
8279	76	3MCZ NT2	01/18/91	1.189	0.00	> 100.00	0.00	> 0.20
8280	76	3MC CEM	01/18/91	1.008	0.00	> 100.00	0.00	> 0.76
8280	76	3MCZ NT2	01/18/91	1.189	0.00	> 100.00	0.00	> 2.28
8281	76	3MT CEM	01/18/91	1.102	0.00	> 100.00	0.00	1.64
8281	76	3MCZ NT2	01/18/91	1.204	0.00	94.20	0.00	> 0.32
8282	76	3MT CEM	01/18/91	1.102	0.00	> 100.00	0.00	0.00

## CUMULATIVE SUMMARY (cont'd)

AVG No.	Ship- ment	Pit Cell # Line	Test Date	diff- mtl.	TC 50	TC 25	SI	TAI
6332	76	349 HT2	01/18/91	1.204	0.00	85.10	0.00	0.45
6333	76	340 CDR	01/18/91	1.093	0.00	100.00	0.00	0.00
6333	76	348 HT2	01/18/91	0.969	0.00	55.30	0.00	0.10
6334	76	406 CDR	02/21/91	0.851	28.50	7.45	0.26	10.43
6334	76	402 HT2	02/21/91	1.252	5.61	> 100.00	> 17.83	> 45.67
6335	76	406 CDR	02/21/91	0.851	71.50	93.80	1.31	3.55
6335	76	402 HT2	02/21/91	1.252	6.43	1.00	0.16	37.82
6336	76	404 CDR	02/21/91	0.897	0.00	33.90	0.00	9.79
6336	76	403 HT2	02/21/91	1.330	45.20	> 100.00	> 2.21	> 14.26
6337	76	404 CDR	02/21/91	0.897	0.00	5.12	0.00	0.00
6337	76	403 HT2	02/21/91	1.330	0.00	1.24	0.00	0.00
6338	76	401 CDR	02/21/91	0.709	0.00	83.00	0.00	0.00
6338	76	404 HT2	02/21/91	1.193	0.00	57.40	0.00	2.61
6339	76	401 CDR	02/21/91	0.709	0.00	> 100.00	> 0.00	> 0.15
6339	76	404 HT2	02/21/91	1.193	48.80	> 100.00	> 2.14	> 19.13
640	76	403 CDR	02/21/91	0.896	0.00	> 100.00	0.00	3.54
640	76	405 HT2	02/21/91	1.354	0.00	> 100.00	0.00	0.05
641	76	403 CDR	02/21/91	0.896	0.00	38.60	0.00	5.23
641	76	405 HT2	02/21/91	1.354	0.00	> 100.00	0.00	0.51
642	76	404 CDR	02/21/91	0.769	0.00	30.40	0.00	0.23
642	76	404 HT2	02/21/91	1.398	0.00	> 100.00	0.00	0.04
6533	75	301 CDR	12/11/90	1.389	0.00	> 0.32	0.00	0.00
6533	75	301 HT2	12/11/90	0.901	0.00	0.76	0.00	0.00
6534	75	301 CDR	12/11/90	1.389	0.00	0.22	0.00	1.35
6534	75	301 HT2	12/11/90	0.901	0.00	> 100.00	0.00	> 4.39
6535	76	317 CDR	01/08/91	0.655	0.00	> 0.32	0.00	0.00
6535	76	349 HT2	01/08/91	1.299	0.00	> 0.32	0.00	0.00
6536	76	318 CDR	01/08/91	0.685	0.00	5.20	0.00	0.00
6536	76	340 HT2	01/08/91	1.291	0.00	4.67	0.00	0.00
6537	76	318 CDR	01/08/91	0.685	0.00	> 100.00	0.00	0.00
6537	76	340 HT2	01/08/91	1.291	0.00	> 100.00	0.00	0.00
6538	76	319 CDR	01/08/91	0.616	0.00	18.20	0.00	5.45
6538	76	340 HT2	01/08/91	1.222	0.00	18.10	0.00	0.77
6539	76	319 CDR	01/08/91	0.516	0.00	10.00	0.00	0.00
6539	76	340 HT2	01/08/91	1.222	0.00	12.40	0.00	> 0.30
6540	76	318 CDR	01/08/91	0.738	0.00	> 100.00	0.00	> 13.60
6540	76	348 HT2	01/08/91	1.234	0.00	> 100.00	0.00	0.00
6543	76	340 CDR	01/18/91	1.093	0.00	24.10	0.00	0.34
6543	76	340 HT2	01/18/91	0.969	0.00	> 100.00	0.00	0.00
6544	76	340 CDR	01/18/91	0.996	32.00	21.20	0.66	> 0.60
6544	76	340 HT2	01/18/91	1.164	0.00	> 100.00	0.00	> 0.30
6545	76	340 CDR	01/18/91	0.996	0.00	> 100.00	0.00	1.34
6545	76	340 HT2	01/18/91	1.164	0.00	16.60	0.00	8.86
6546	76	340 CDR	01/18/91	1.022	5.71	> 100.00	> 17.52	> 46.40
6546	76	340 HT2	01/18/91	1.212	7.18	> 44.80	9.02	> 35.81
6547	76	340 CDR	01/18/91	1.022	0.00	> 100.00	0.00	1.44
6547	76	340 HT2	01/18/91	1.212	0.00	52.70	0.00	> 0.32
6548	76	340 CDR	01/18/91	1.165	0.00	45.50	0.00	0.00
6548	76	340 HT2	01/18/91	1.179	0.00	2.39	0.00	0.00
6549	76	340 CDR	01/18/91	1.165	0.00	> 100.00	0.00	> 1.53
6549	76	340 HT2	01/18/91	1.179	0.00	> 100.00	0.00	> 0.44
6550	76	340 CDR	01/18/91	1.179	0.00	> 100.00	0.00	> 0.44
6570	76	347 CDR	01/18/91	1.049	58.40	> 100.00	> 1.71	> 7.32
6570	76	348 HT2	01/18/91	0.913	0.00	50.50	0.00	1.22
6571	76	347 CDR	01/18/91	1.049	0.00	> 100.00	0.00	5.95
6571	76	348 HT2	01/18/91	0.913	0.00	> 100.00	0.00	> 3.69
6572	76	498 CDR	02/05/91	1.326	61.40	78.80	1.28	> 6.49
6572	76	498 HT2	02/05/91	1.179	43.30	> 100.00	> 2.31	> 18.06
6573	76	498 CDR	02/05/91	1.326	0.00	> 100.00	0.00	> 0.14
6573	76	497 HT2	02/05/91	1.127	0.00	> 100.00	0.00	> 2.37
6574	76	498 CDR	02/05/91	1.304	0.00	9.03	0.00	0.00
6574	76	499 HT2	02/05/91	1.280	0.00	> 100.00	0.00	1.08
6575	76	498 CDR	02/05/91	1.304	11.10	> 100.00	9.02	> 35.27
6575	76	499 HT2	02/05/91	1.080	5.00	74.90	14.99	> 44.86
6576	76	498 CDR	02/05/91	1.260	0.00	19.20	0.00	> 0.08
6576	76	494 HT2	02/05/91	0.979	0.00	29.60	0.00	> 1.13
6577	76	498 CDR	02/05/91	1.260	0.00	0.92	0.00	0.00
6577	76	494 HT2	02/05/91	0.979	0.00	64.10	0.00	> 2.03
6578	76	497 CDR	02/05/91	1.216	20.80	51.10	2.48	> 15.11
6579	76	497 CDR	02/05/91	1.216	0.00	2.65	0.00	0.08
6579	76	498 HT2	02/05/91	1.107	0.00	> 100.00	0.00	0.73
6580	76	490 CDR	02/05/91	1.287	21.40	21.00	0.97	> 10.26
6580	76	492 HT2	02/05/91	1.105	11.10	57.20	5.16	> 29.95
6581	76	490 CDR	02/05/91	1.287	0.00	> 100.00	0.00	0.08
6581	76	492 HT2	02/05/91	1.105	0.00	> 100.00	0.00	0.08
6582	76	499 CDR	02/05/91	1.207	0.00	> 100.00	0.00	> 1.19
6582	76	498 HT2	02/05/91	1.157	31.00	> 100.00	3.23	> 17.39
6583	76	499 CDR	02/05/91	1.207	0.00	> 100.00	0.00	> 2.50
6583	76	498 HT2	02/05/91	1.157	0.00	> 100.00	0.00	> 2.97

## Cumulative Summary (cont'd)

AVL	Skip-	Pit Cell	Test	Diff-	IC 50	PC 25	SI	TAT
No.	ment	# Line	Date	mtl.				
4356	76	49N CEM	02/05/91	1.193	0.00	17.35	0.00	0.04
4354	76	49E HT2	02/05/91	0.907	0.00	4.90	0.00	1.00
4356	76	49E CEM	02/05/91	1.193	0.00	> 100.00	0.00	0.23
4356	76	49E HT2	02/05/91	0.907	72.20	> 100.00	1.38	17.28
4357	76	49X CEM	02/05/91	1.172	0.00	> 100.00	0.00	0.43
4357	76	49X HT2	02/05/91	1.190	0.00	> 100.00	0.00	0.04
4358	76	49X CEM	02/05/91	1.172	0.00	> 100.00	0.00	0.08
4358	76	49F HT2	02/05/91	1.190	0.00	> 100.00	0.00	0.15
4359	76	49Y CEM	02/05/91	0.815	0.00	> 100.00	0.00	11.81
4359	76	49Y HT2	02/05/91	1.144	0.00	> 100.00	0.00	0.00
4360	76	49Y CEM	02/05/91	0.816	0.00	> 100.00	0.00	11.70
4360	76	49G HT2	02/05/91	1.144	0.00	> 100.00	0.00	0.00
4361	76	49Z CEM	02/05/91	1.152	0.00	> 100.00	0.00	0.04
4361	76	49H HT2	02/05/91	1.096	0.00	79.20	0.00	4.36
4363	76	49Z CEM	02/05/91	1.152	0.00	> 100.00	0.00	0.08
4363	76	49H HT2	02/05/91	1.096	0.00	96.80	0.00	0.05
4364	76	49D CEM	02/05/91	0.907	0.00	49.90	0.00	1.10
4364	76	49I HT2	02/05/91	1.104	0.00	53.30	0.00	2.73
4365	76	49D CEM	02/05/91	0.907	0.00	> 100.00	0.00	0.08
4365	76	49I HT2	02/05/91	1.104	0.00	29.10	0.00	0.04
4366	76	4A1 CEM	02/05/91	0.900	0.00	95.00	0.00	5.77
4366	76	4B3 HT2	02/05/91	1.048	0.00	69.80	0.00	2.73
4367	76	4A1 CEM	02/05/91	0.900	100.00	> 100.00	1.00	0.07
4367	76	4B3 HT2	02/05/91	1.043	0.00	50.50	0.00	2.03
4368	76	4A2 CEM	02/05/91	0.940	0.00	88.70	0.00	0.03
4368	76	4B6 HT2	02/05/91	1.053	0.00	44.10	0.00	0.08
4369	76	4A2 CEM	02/05/91	0.940	0.00	> 100.00	0.00	2.62
4369	76	4B6 HT2	02/05/91	1.053	0.00	> 100.00	0.00	0.03
4370	76	4A3 CEM	02/05/91	1.222	0.00	> 100.00	0.00	0.08
4370	76	4B6 HT2	02/05/91	1.093	0.00	> 100.00	0.00	0.44
4371	76	4A3 CEM	02/05/91	1.222	0.00	> 100.00	0.00	0.00
4371	76	4B6 HT2	02/05/91	1.093	0.00	> 100.00	0.00	0.08
4372	76	4A4 CEM	02/05/91	1.087	0.00	> 100.00	0.00	0.00
4372	76	4B8 HT2	02/05/91	1.216	0.00	> 100.00	0.00	0.05
4373	76	4A4 CEM	02/05/91	1.087	0.00	> 100.00	0.00	1.01
4373	76	4B8 HT2	02/05/91	1.216	0.00	> 100.00	0.00	0.15
4374	76	4A5 CEM	02/05/91	1.222	0.00	> 100.00	0.00	0.00
4374	76	4B9 HT2	02/05/91	1.093	0.00	> 100.00	0.00	0.08
4375	76	4A4 CEM	02/05/91	1.087	0.00	> 100.00	0.00	0.00
4375	76	4B9 HT2	02/05/91	1.216	0.00	> 100.00	0.00	0.05
4376	76	4A4 CEM	02/05/91	1.087	0.00	> 100.00	0.00	0.00
4376	76	4B9 HT2	02/05/91	1.216	0.00	> 100.00	0.00	0.15
4377	76	4A5 CEM	02/05/91	1.222	0.00	> 100.00	0.00	0.00
4377	76	4B9 HT2	02/05/91	1.093	0.00	> 100.00	0.00	0.08
4378	76	4C1 CEM	02/05/91	1.222	0.00	> 100.00	0.00	0.00
4378	76	4B9 HT2	02/05/91	1.093	0.00	> 100.00	0.00	0.08
4379	76	4A6 CEM	02/05/91	1.087	0.00	> 100.00	0.00	0.00
4379	76	4B9 HT2	02/05/91	1.216	0.00	> 100.00	0.00	0.05
4380	76	4A6 CEM	02/05/91	1.087	0.00	> 100.00	0.00	1.01
4380	76	4B9 HT2	02/05/91	1.216	0.00	> 100.00	0.00	0.15
4381	76	4A7 CEM	02/05/91	1.141	0.00	> 100.00	0.00	0.00
4381	76	4B9 HT2	02/05/91	1.354	0.00	> 100.00	0.00	0.00
4382	76	4A7 CEM	02/05/91	1.141	0.00	> 100.00	0.00	1.20
4382	76	4B9 HT2	02/05/91	1.354	0.00	> 100.00	0.00	0.00
4383	76	4A7 CEM	02/05/91	1.141	0.00	38.10	0.00	0.00
4383	76	4B9 HT2	02/05/91	1.354	0.00	45.60	0.00	0.00
4384	76	31B CEM	01/08/91	0.680	0.00	14.00	0.00	1.00
4384	76	34T HT2	01/08/91	1.204	0.00	16.20	0.00	0.10
4385	76	31B CEM	01/08/91	0.680	0.00	> 100.00	0.00	0.22
4385	76	34T HT2	01/08/91	1.204	0.00	> 100.00	0.00	0.08
4386	76	31C CEM	01/08/91	0.746	0.00	38.10	0.00	0.00
4386	76	34U HT2	01/08/91	1.257	0.00	45.60	0.00	0.00
4387	76	31C CEM	01/08/91	0.746	0.00	11.40	0.00	0.00
4387	76	34U HT2	01/08/91	1.257	0.00	12.80	0.00	0.00
4388	76	3A1 CEM	02/08/91	1.141	0.00	> 100.00	0.00	1.20
4388	76	4A6 HT2	02/08/91	1.354	0.00	> 100.00	0.00	0.00
4389	76	3A1 CEM	02/08/91	1.141	0.00	30.60	0.00	1.70
4389	76	4A6 HT2	02/08/91	1.354	0.00	16.20	0.00	0.03
4390	76	3A7 HT2	02/08/91	1.278	0.00	> 100.00	0.00	1.28
4390	76	3D2 CEM	12/11/90	1.344	0.00	> 100.00	0.00	0.00
4391	76	3C1 HT2	12/11/90	0.965	0.00	> 100.00	0.00	0.00
4391	76	3D2 CEM	12/11/90	1.344	0.00	0.32	0.00	2.46
4392	76	3C1 HT2	12/11/90	0.965	0.00	> 100.00	0.00	0.00
4393	76	3D3 CEM	12/11/90	1.304	0.00	> 100.00	0.00	1.97
4393	76	3C2 HT2	12/11/90	0.954	0.00	> 100.00	0.00	1.84
4394	76	3D3 CEM	12/11/90	1.304	0.00	102.00	0.00	1.29
4394	76	3C2 HT2	12/11/90	0.954	0.00	> 100.00	0.00	7.76
4395	76	3D4 CEM	12/11/90	1.247	0.00	> 100.00	0.00	1.32
4395	76	3C3 HT2	12/11/90	0.954	0.00	> 100.00	0.00	0.93
4396	76	3D4 CEM	12/11/90	1.247	0.00	> 100.00	0.00	3.58
4396	76	3C3 HT2	12/11/90	0.954	0.00	> 100.00	0.00	0.30
4397	76	3D5 CEM	12/11/90	1.242	0.00	95.10	0.00	7.34
4397	76	3C1 HT2	12/11/90	1.086	0.00	> 100.00	0.00	14.41
4398	76	3D5 CEM	12/11/90	1.242	0.00	> 100.00	0.00	0.00
4398	76	3C1 HT2	12/11/90	1.086	0.00	> 100.00	0.00	2.43
4399	76	3D6 CEM	12/11/90	1.261	0.00	> 100.00	0.00	8.28
4399	76	3C2 HT2	12/11/90	1.022	0.00	> 100.00	0.00	7.20
4400	76	3D6 CEM	12/11/90	1.261	0.00	> 100.00	0.00	2.26
4400	76	3C2 HT2	12/11/90	1.022	0.00	> 100.00	0.00	2.10
4401	76	3D7 CEM	12/11/90	1.254	0.00	> 100.00	0.00	1.68
4401	76	3C3 HT2	12/11/90	0.978	0.00	> 100.00	0.00	0.00
4402	76	3D7 CEM	12/11/90	1.254	0.00	> 100.00	0.00	5.16
4402	76	3C3 HT2	12/11/90	0.978	0.00	> 100.00	0.00	0.00
4403	76	3D8 CEM	12/11/90	1.195	0.00	> 100.00	0.00	3.00
4403	76	3C4 HT2	12/11/90	1.063	0.00	> 100.00	0.00	0.02
4404	76	3D8 CEM	12/11/90	1.195	0.00	0.22	0.00	3.22
4404	76	3C4 HT2	12/11/90	1.063	0.00	> 100.00	0.00	0.03

## CUMULATIVE SUMMARY (cont'd)

AVS	Sample	Flt Cell	Test	Date	Diff.	IC 50	IC 25	SI	TAT
No.	ment	# Line			mtl.				
8432	75	309 CEM	12/11/90	1.252	0.00	> 100.00	0.00	> 7.01	
8432	75	309 MT2	12/11/90	0.998	0.00	> 100.00	0.00	0.60	
8433	75	309 CEM	12/11/90	1.252	14.70	> 100.00	> 6.79	> 30.99	
8433	75	309 CEM	01/04/91	1.477	0.00	> 100.00	0.00	> 13.04	
8433	75	309 MT2	12/11/90	0.998	59.60	> 100.00	> 1.68	> 24.19	
8434	75	308 CEM	12/11/90	1.176	66.40	> 100.00	> 1.51	> 7.38	
8434	75	308 CEM	01/04/91	1.255	545.00	> 1000.0	> 1.83	> 19.90	
8434	75	309 MT2	12/11/90	0.977	2.11	> 100.00	> 67.44	> 54.02	
8435	75	308 CEM	12/11/90	1.176	0.00	0.14	0.00	0.00	
8435	75	309 MT2	12/11/90	0.977	0.00	> 100.00	0.00	> 6.83	
8436	75	308 CEM	12/11/90	1.271	0.00	2.74	0.00	> 5.44	
8436	75	309 MT2	12/11/90	1.024	14.10	> 100.00	> 7.09	> 18.71	
8437	75	308 CEM	12/11/90	1.271	0.00	0.18	0.00	> 11.66	
8437	75	309 MT2	12/11/90	1.024	37.70	> 100.00	> 2.66	> 34.36	
8438	75	308 CEM	12/12/90	1.361	0.00	15.30	0.00	0.00	
8438	75	309 MT2	12/12/90	1.033	0.00	1.00	0.00	> 0.10	
8439	75	308 CEM	12/12/90	1.361	0.00	> 100.00	0.00	> 4.58	
8439	75	309 MT2	12/12/90	1.033	0.00	> 100.00	0.00	> 2.99	
8440	75	308 CEM	12/12/90	1.248	0.00	29.60	0.00	0.00	
8440	75	309 MT2	12/12/90	1.092	1.68	27.20	16.21	> 21.76	
8441	75	308 CEM	12/12/90	1.248	0.00	0.23	0.00	0.24	
8441	75	309 MT2	12/12/90	1.092	6.38	> 100.00	> 5.69	> 36.85	
8442	75	308 CEM	12/12/90	1.180	0.00	> 100.00	0.00	> 3.51	
8442	75	309 MT2	12/12/90	1.097	0.00	> 100.00	0.00	> 3.99	
8443	75	308 CEM	12/12/90	1.180	0.00	0.19	0.00	1.24	
8443	75	309 MT2	12/12/90	1.097	0.00	18.10	0.00	> 7.71	
8444	75	308 CEM	12/12/90	1.521	0.00	> 100.00	0.00	> 1.19	
8444	75	309 MT2	12/12/90	1.101	0.00	2.36	0.00	> 2.46	
8445	75	308 CEM	12/12/90	1.504	0.00	0.22	0.00	> 3.31	
8445	75	309 MT2	12/12/90	1.101	0.00	> 100.00	0.00	> 1.14	
8446	75	308 CEM	12/12/90	1.474	0.00	40.70	0.00	1.19	
8446	75	309 MT2	12/12/90	1.096	0.00	> 100.00	0.00	> 7.43	
8447	75	308 CEM	12/12/90	1.474	0.00	0.23	0.00	1.54	
8447	75	309 MT2	12/12/90	1.096	0.00	1.20	0.00	> 1.27	
8448	75	308 CEM	12/12/90	1.437	0.00	> 100.00	0.00	0.35	
8448	75	309 MT2	12/12/90	1.134	0.00	> 100.00	0.00	0.00	
8449	75	308 CEM	12/12/90	1.437	0.00	76.50	0.00	2.53	
8449	75	309 MT2	12/12/90	1.134	0.00	9.60	0.00	0.02	
8450	75	308 CEM	12/12/90	1.391	0.00	12.30	0.00	0.00	
8450	75	309 MT2	12/12/90	0.816	0.00	0.43	0.00	0.00	
8451	75	308 CEM	12/12/90	1.391	0.00	20.60	0.00	0.56	
8451	75	309 MT2	12/12/90	0.816	0.00	13.70	0.00	0.00	
8452	75	308 CEM	12/12/90	1.362	0.00	14.80	0.00	0.00	
8452	75	309 MT2	12/12/90	0.946	0.00	15.70	0.00	> 2.35	
8453	75	308 CEM	12/12/90	1.362	0.00	0.22	0.00	> 1.60	
8453	75	309 MT2	12/12/90	0.946	0.00	43.00	0.00	> 2.79	
8454	75	308 CEM	12/12/90	1.290	0.00	> 100.00	0.00	1.48	
8454	75	309 MT2	12/12/90	1.085	0.00	> 100.00	0.00	> 3.52	
8455	75	308 CEM	12/12/90	1.290	85.70	0.32	0.00	> 9.86	
8455	75	309 MT2	12/12/90	1.085	0.00	> 100.00	0.00	> 6.21	
8456	75	308 CEM	12/12/90	1.164	0.00	> 100.00	0.00	0.20	
8456	75	309 MT2	12/12/90	0.994	0.00	> 100.00	0.00	> 2.16	
8457	75	308 CEM	12/12/90	1.164	0.00	> 100.00	0.00	> 1.40	
8457	75	309 MT2	12/12/90	0.994	0.00	> 100.00	0.00	> 5.30	
8458	75	308 CEM	12/12/90	1.482	0.00	25.20	0.00	> 0.61	
8458	75	309 MT2	12/12/90	1.311	0.00	-1.73	0.00	0.00	
8459	75	308 CEM	12/12/90	1.482	0.00	0.28	0.00	0.82	
8459	75	309 MT2	12/12/90	1.311	0.00	10.00	0.00	0.00	
8460	75	308 CEM	12/12/90	1.343	0.00	56.00	0.00	0.03	
8460	75	309 MT2	12/12/90	1.089	0.00	> 100.00	0.00	> 3.35	
8461	75	308 CEM	12/12/90	1.343	0.00	35.40	0.00	0.00	
8461	75	309 MT2	12/12/90	1.089	0.00	> 100.00	0.00	> 1.57	
8462	75	308 CEM	12/12/90	1.334	0.00	> 100.00	0.00	> 1.50	
8462	75	309 MT2	12/12/90	1.087	0.00	> 100.00	0.00	> 0.52	
8463	75	308 CEM	12/12/90	1.334	0.00	13.10	0.00	0.14	
8463	75	309 MT2	12/12/90	1.087	0.00	23.40	0.00	> 1.21	
8464	75	308 CEM	12/12/90	1.197	0.00	58.40	0.00	0.00	
8464	75	309 MT2	12/12/90	1.006	0.00	> 100.00	0.00	> 5.20	
8465	75	308 CEM	12/12/90	1.197	0.00	> 100.00	0.00	0.80	
8465	75	309 MT2	12/12/90	1.006	0.00	> 100.00	0.00	> 5.11	
8466	75	308 CEM	12/12/90	1.278	0.00	> 100.00	0.00	> 1.47	
8466	75	309 MT2	12/12/90	1.089	53.80	> 100.00	> 1.86	> 10.72	
8467	75	308 CEM	12/12/90	1.278	0.00	> 100.00	0.00	> 1.85	
8467	75	309 MT2	12/12/90	1.089	0.00	> 100.00	0.00	> 0.79	
8468	75	308 CEM	12/12/90	1.273	0.00	83.00	0.00	0.00	
8468	75	309 MT2	12/12/90	1.074	0.00	> 100.00	0.00	> 3.69	
8469	75	308 CEM	12/12/90	1.273	100.00	0.31	0.00	> 7.06	
8469	75	309 MT2	12/12/90	1.074	24.70	> 100.00	> 4.05	> 26.45	

## Cumulative Summary (cont'd)

AVS No.	SPC#	Pit Cell #	Date	Differ- ential	IC 50	IC 25	\$1	TAI
8470	75	SEA CEM	12/12/90	1.386	0.00	> 100.00	0.00	0.11
8471	75	SEA CEM	12/12/90	1.386	0.00	0.27	0.00	0.70
8472	75	SEB CEM	12/12/90	1.293	0.00	38.80	0.00	0.00
8473	75	SEB CEM	12/12/90	1.293	0.00	0.23	0.00	0.03
8474	75	SEC CEM	12/12/90	1.456	0.00	21.00	0.00	0.00
8475	75	SEC CEM	12/12/90	1.456	0.00	0.25	0.00	1.51
8476	75	SET CEM	12/13/90	1.100	0.00	5.29	0.00	0.89
8476	75	SEG MT2	12/13/90	1.148	0.00	16.20	0.00	0.62
8477	75	SET CEM	12/13/90	1.100	0.00	> 100.00	0.00	7.31
8477	75	SEG MT2	12/13/90	1.148	0.00	> 100.00	0.00	1.49
8478	75	SEU CEM	12/13/90	1.169	0.00	> 100.00	0.00	0.00
8478	75	SEM MT2	12/13/90	1.169	0.00	> 100.00	0.00	2.51
8479	75	SEU CEM	12/13/90	1.169	0.00	> 100.00	0.00	0.75
8479	75	SEM MT2	12/13/90	1.165	0.00	> 100.00	0.00	2.49
8480	75	SEV CEM	12/13/90	1.233	0.00	> 100.00	0.00	1.42
8480	75	SEI MT2	12/13/90	1.150	0.00	> 100.00	0.00	1.56
8481	75	SEV CEM	12/13/90	1.238	0.00	76.80	0.00	0.28
8481	75	SEI MT2	12/13/90	1.150	0.00	48.50	0.00	0.00
8482	75	SEV CEM	12/13/90	1.340	9.46	60.10	6.36	24.39
8482	75	SEJ MT2	12/13/90	1.203	13.20	49.20	3.23	18.92
8483	75	SEW CEM	12/13/90	1.340	0.00	26.10	0.00	7.19
8483	75	SEJ MT2	12/13/90	1.203	15.70	48.50	2.90	18.42
8484	75	3EX CEM	12/13/90	1.294	0.00	55.40	0.00	1.44
8484	75	3EK MT2	12/13/90	1.155	0.00	49.80	0.00	0.00
8485	75	3EX CEM	12/13/90	1.294	0.00	> 100.00	0.00	0.29
8485	75	3EK MT2	12/13/90	1.155	0.00	48.00	0.00	0.03
8486	75	3EV CEM	12/13/90	1.395	4.00	18.80	0.00	1.43
8486	75	3EL MT2	12/13/90	1.159	0.00	5.05	0.00	0.00
8487	75	3EV CEM	12/13/90	1.395	0.00	7.43	0.00	0.60
8487	75	3EL MT2	12/13/90	1.159	0.00	4.26	0.00	0.00
8488	75	3EZ CEM	12/13/90	1.177	0.00	25.30	0.00	1.13
8488	75	3F1 #2	12/13/90	1.161	0.00	18.50	0.00	0.20
8489	75	3EZ CEM	12/13/90	1.177	0.00	2.63	0.00	7.42
8489	75	3EM MT2	12/13/90	1.161	0.00	4.52	0.00	2.74
8490	75	3FO CEM	12/13/90	1.297	0.00	29.90	0.00	3.61
8490	75	3EM MT2	12/13/90	1.129	0.00	49.00	0.00	1.25
8491	75	3FO CEM	12/13/90	1.297	0.00	60.30	0.00	2.50
8491	75	3EM MT2	12/13/90	1.129	0.00	49.20	0.00	0.46
8492	75	3F1 CEM	12/13/90	1.340	0.00	37.70	0.00	0.05
8492	75	3EO MT2	12/13/90	1.172	0.00	45.70	0.00	0.00
8493	75	3F1 CEM	12/13/90	1.340	0.00	1.42	0.00	0.03
8493	75	3EO MT2	12/13/90	1.172	0.00	1.44	0.00	0.00
8494	75	3F2 CEM	12/13/90	1.394	0.00	5.01	0.00	0.00
8494	75	3EP MT2	12/13/90	1.121	0.00	2.93	0.00	0.03
8495	75	3F2 CEM	12/13/90	1.394	0.00	11.50	0.00	0.00
8495	75	3EP MT2	12/13/90	1.121	0.00	14.80	0.00	0.00
8496	75	3F3 CEM	12/13/90	1.357	0.00	13.80	0.00	0.00
8496	75	3EP MT2	12/13/90	1.096	0.00	4.78	0.00	0.00
8497	75	3F3 CEM	12/13/90	1.357	64.70	> 100.00	1.14	8.18
8497	75	3EP MT2	12/13/90	1.096	0.00	17.50	0.00	0.00
8498	75	3F4 CEM	12/13/90	1.370	0.00	> 100.00	0.00	0.00
8498	75	3ER MT2	12/13/90	1.092	0.00	> 100.00	0.00	0.35
8499	75	3F6 CEM	12/13/90	1.370	0.00	1.31	0.00	0.00
8499	75	3ER MT2	12/13/90	1.092	0.00	0.90	0.00	0.00
8500	76	4AK CEM	02/08/91	1.262	0.00	> 100.00	0.00	5.62
8500	76	4AT MT2	02/08/91	1.278	0.00	> 100.00	0.00	0.98
8501	76	4AL CEM	02/08/91	1.074	0.00	15.50	0.00	0.78
8501	76	4AB MT2	02/08/91	1.333	25.50	19.20	0.73	3.29
8502	76	4AL CEM	02/08/91	1.074	0.00	> 100.00	0.00	1.83
8502	76	4AB MT2	02/08/91	1.333	0.00	53.40	0.00	0.00
8503	76	4AM CEM	02/08/91	1.173	0.00	27.10	0.00	0.00
8503	76	4AF MT2	02/08/91	1.369	0.00	> 100.00	0.00	0.00
8504	76	4AM CEM	02/08/91	1.173	0.00	> 100.00	0.00	0.12
8504	76	4AF MT2	02/08/91	1.349	0.00	> 100.00	0.00	0.00
8505	76	4AM CEM	02/08/91	1.267	0.00	36.30	0.00	4.19
8505	76	4AA MT2	02/08/91	1.335	12.00	> 100.00	8.35	28.81
8506	76	4AM CEM	02/08/91	1.267	0.00	> 100.00	0.00	2.00
8506	76	4AA MT2	02/08/91	1.335	0.00	> 100.00	0.00	0.03
8507	76	4AD CEM	02/08/91	0.966	0.00	58.20	0.00	1.15
8507	76	4AB MT2	02/08/91	1.274	0.00	53.20	0.00	0.65
8508	76	4AO CEM	02/08/91	0.966	0.00	> 100.00	0.00	2.21
8508	76	4AB MT2	02/08/91	1.274	0.00	> 100.00	0.00	13.20
8509	76	4AP CEM	02/08/91	1.328	0.00	0.30	0.00	0.38
8509	76	4AC MT2	02/08/91	1.347	0.00	3.76	0.00	0.00
8510	76	4AP CEM	02/08/91	1.328	0.00	44.50	0.00	0.00
8510	76	4AC MT2	02/08/91	1.347	0.00	16.60	0.00	0.00
8511	76	4AD CEM	02/08/91	1.004	0.00	> 100.00	0.00	10.07
8511	76	4AD MT2	02/08/91	1.358	0.00	> 100.00	0.00	0.00

## CUMULATIVE SUMMARY (cont'd)

Ave.	Ship:	PLT Cels	Test	Diff-	12.50	TC 25	\$1	TAI
No.	ment	# Line	Date	Init.				
8512	76	640 CEM	02/08/91	1.006	0.00	32.00	0.00	1.06
8512	76	640 MT2	02/08/91	1.358	0.00 >	100.00	0.00 >	2.32
8513	76	640 CEM	02/08/91	1.016	0.00 >	100.00	0.00	2.92
8513	76	640 MT2	02/08/91	1.309	0.00	54.73	0.00	0.00
8514	76	640 CEM	02/08/91	1.016	15.00 >	100.00 >	6.69 >	31.18
8514	76	640 MT2	02/08/91	1.309	6.42	12.20	1.89	14.13
8515	76	640 CEM	02/08/91	1.073	0.00 >	100.00	0.00 >	6.38
8515	76	640 MT2	02/08/91	1.301	0.00	74.50	0.00	0.04
8516	76	640 CEM	02/08/91	1.075	0.00	45.60	0.00	0.00
8516	76	640 MT2	02/08/91	1.301	0.00	29.00	0.00	0.00
8517	76	640 CEM	02/08/91	0.827	0.00 >	100.00	0.00	0.00
8517	76	640 MT2	02/08/91	1.239	0.00	50.20	0.00	2.91
8518	76	640 CEM	02/08/91	0.827	0.01 >	100.00	0.00	0.00
8518	76	640 MT2	02/08/91	1.239	0.00 >	100.00	0.00	0.80
8519	76	640 CEM	02/08/91	0.887	39.90 >	100.00 >	2.51 >	19.94
8519	76	640 MT2	02/08/91	1.287	7.39 >	100.00 >	13.53 >	38.09
8520	26A	10E CEM	12/28/90	0.99	> 0.032	0.00026 >	122.00 >	67.87
8521	26A	379 CEM	11/21/90	0.672	0.00 >	100.00	0.00 >	14.29
8521	26A	348 CEM	11/30/90	1.385	0.00	578.00	0.00 >	1.35
8521	26A	797 MT2	11/30/90	1.286	- .30	155.00	0.00	0.00
8522	26A	348 CEM	11/30/90	1.385	0.00 >	10.00	0.00 >	0.60
8522	26A	392 MT2	11/30/90	1.286	0.00 >	10.00	0.00	0.00
8523	26A	340 CEM	11/30/90	1.219	0.00 >	10.00	0.00	0.00
8523	26A	340 MT2	11/30/90	1.210	0.00	0.32	0.00	0.00
8524	26A	340 CEM	11/30/90	1.219	0.00 >	10.00	0.00	1.55
8526	26A	340 MT2	11/30/90	1.210	0.00 >	0.03	0.00	0.00
8525	26A	340 CEM	11/30/90	1.240	0.00 >	10.00	0.00	0.00
8525	26A	341 MT2	11/30/90	1.266	0.00 >	10.00	0.00 >	4.81
8526	26A	340 CEM	11/30/90	1.240	0.00 >	10.00	0.00 >	4.36
8526	26A	341 MT2	11/30/90	1.266	0.00	0.02	0.00	0.00
8527	26A	340 CEM	11/30/90	1.140	0.00 >	10.00	0.00	4.34
8527	26A	342 MT2	11/30/90	1.105	0.00	6.22	0.00	0.26
8528	76	310 CEM	01/08/91	0.722	0.00 <	0.32	0.00	0.00
8528	76	310 MT2	01/08/91	1.229	0.00	0.49	0.00	0.00
8529	76	310 CEM	01/08/91	0.722	0.00	45.60	0.00	0.42
8529	76	310 MT2	01/08/91	1.229	0.00	37.60	0.00	0.00
8530	76	310 CEM	01/08/91	0.816	0.00 >	100.00	0.00 >	7.79
8530	76	310 MT2	01/08/91	1.209	0.00 >	100.00	0.00	0.00
8531	76	310 CEM	01/08/91	0.816	0.00	60.91	0.00	0.00
8531	76	310 MT2	01/08/91	1.230	0.00	68.20	0.00	0.00
8532	76	31F CEM	01/08/91	0.764	0.00	15.90	0.00 >	0.89
8532	76	31X MT2	01/08/91	1.246	0.00	17.10	0.00	0.00
8533	76	31F CEM	01/08/91	0.764	0.00	4.54	0.00 >	2.03
8533	76	31X MT2	01/08/91	1.246	0.00	22.20	0.00	0.00
8534	76	31G CEM	01/08/91	0.719	0.00	36.50	0.00	0.00
8534	76	31Y MT2	01/08/91	1.235	0.00	61.10	0.00	0.00
8536	76	31G CEM	01/08/91	0.719	0.00	1.76	0.00	0.00
8536	76	31Y MT2	01/08/91	1.235	0.00	1.20	0.00	0.00
8537	76	31H CEM	01/08/91	0.617	0.00	22.80	0.00	0.00
8537	76	31Z MT2	01/08/91	1.254	0.06 >	100.00	0.00 >	1.30
8538	76	31W CEM	01/08/91	0.617	0.00	13.60	0.00 >	0.02
8538	76	31Z MT2	01/08/91	1.254	0.00	3.09	0.00	0.00
8539	76	31I CEM	01/08/91	0.789	0.00	4.71	0.00	0.00
8539	76	310 MT2	01/08/91	1.216	0.00	0.72	0.00	0.00
8540	76	31I CEM	01/08/91	0.789	0.00	57.90	0.00	1.68
8540	76	310 MT2	01/08/91	1.216	0.00 >	100.00	0.00	0.00
8541	76	31J CEM	01/08/91	0.697	0.00	6.32	0.00	0.00
8541	76	311 MT2	01/08/91	1.165	0.00	16.70	0.00	0.00
8542	76	31J CEM	01/08/91	0.697	0.00	40.50	0.00	0.00
8542	76	311 MT2	01/08/91	1.165	0.00	49.50	0.00	0.00
8543	76	31K CEM	01/08/91	0.696	0.00	2.61	0.00	0.00
8543	76	312 MT2	01/08/91	1.195	0.00	5.33	0.00	0.00
8544	76	31K CEM	01/08/91	0.696	0.00	2.76	0.00 >	0.06
8544	76	312 MT2	01/08/91	1.195	0.00	53.00	0.00	4.71
8545	76	31L CEM	01/08/91	0.644	0.00	23.20	0.00	1.60
8545	76	313 MT2	01/08/91	1.228	0.00	65.30	0.00	1.11
8546	76	31L CEM	01/08/91	0.644	0.00	16.60	0.00	3.48
8546	76	313 MT2	01/08/91	1.228	0.00	44.60	0.00	0.00
8547	76	31M CEM	01/08/91	0.670	0.00 >	100.00	0.00 >	1.67
8547	76	314 MT2	01/08/91	1.207	0.00 >	100.00	0.00 >	0.08
8548	76	31M CEM	01/08/91	0.670	0.00	1.27	0.00 >	0.22
8548	76	314 MT2	01/08/91	1.207	0.00	2.93	0.00	0.00
8549	76	31N CEM	01/08/91	0.606	0.00	66.70	0.00 >	4.69
8549	76	315 MT2	01/08/91	1.181	0.00	66.70	0.00 >	0.40
8550	76	31M CEM	01/08/91	0.606	0.00 >	100.00	0.00	0.55
8550	76	315 MT2	01/08/91	1.181	0.00	92.70	0.00	0.00
8551	76	319 CEM	01/09/91	0.822	0.00	16.80	0.00	0.00
8551	76	31P MT2	01/09/91	1.334	0.00	29.60	0.00	0.00

## Cumulative Summary (cont'd)

AVS No.	Ship- ment	Pit Cell # Line	Test Date	Differ- ential:	TC 5G	TC 25	%	TAI
8552 76		3-9 CEM	01/09/91	0.822	0.00	6.67	0.00 >	0.25
8552 76		31P MT2	01/09/91	1.334	0.00	0.20	0.00	0.00
8553 76		31A CEM	01/09/91	0.759	0.00	50.50	0.00	0.31
8553 76		31G MT2	01/09/91	1.340	0.00	61.00	0.00	0.00
8554 76		31A CEM	01/09/91	0.755	0.00	13.00	0.00 >	0.48
8554 76		31G MT2	01/09/91	1.340	0.00	14.50	0.00	0.00
8555 76		31B CEM	01/09/91	0.769	100.00 >	100.00 >	1.00 >	6.77
8555 76		31U MT2	01/09/91	1.373	0.00	65.30	0.00 >	0.13
8556 76		31B CEM	01/09/91	0.769	0.00	73.30	0.00 >	0.30
8556 76		31U MT2	01/09/91	1.373	0.00 >	100.00	0.00	2.20
8557 76		31C CEM	01/09/91	0.659	0.00	14.80	0.00	0.00
8557 76		31S MT2	01/09/91	1.447	0.00	13.10	0.00	0.00
8558 76		31C CEM	01/09/91	0.659	0.00 >	100.00	0.00	0.00
8558 76		31S MT2	01/09/91	1.447	0.00 >	100.00	0.00	0.00
8559 76		31D CEM	01/09/91	0.769	0.00 >	100.00	0.00 >	5.11
8559 76		31T MT2	01/09/91	1.390	0.00 >	100.00	0.00	0.00
8560 76		31D CEM	01/09/91	0.769	0.00 >	100.00	0.00	3.43
8560 76		31T MT2	01/09/91	1.390	0.00 >	100.00	0.00	0.00
8561 76		31E CEM	01/09/91	0.717	0.00	2.61	0.00	0.00
8561 76		31U MT2	01/09/91	1.303	0.00	3.02	0.00	0.00
8562 76		31E CEM	01/09/91	0.717	0.00 >	100.00	0.00 >	1.15
8562 76		31U MT2	01/09/91	1.303	0.00	24.40	0.00	0.00
8563 76		31F CEM	01/09/91	0.776	0.00	92.40	0.00	1.04
8563 76		31V MT2	01/09/91	1.381	0.00 >	100.00	0.00 >	0.06
8564 76		31F CEM	01/09/91	0.776	0.00	95.50	0.00 >	0.21
8564 76		31V MT2	01/09/91	1.381	0.00	81.00	0.00	0.00
8565 76		31G CEM	01/09/91	0.797	0.00 >	100.00	0.00	0.00
8565 76		31W MT2	01/09/91	1.405	0.00 >	100.00	0.00 >	0.32
8566 76		31G CEM	01/09/91	0.797	0.00 >	100.00	0.00	0.00
8566 76		31W MT2	01/09/91	1.405	0.00 >	100.00	0.00	0.00
8567 76		31H CEM	01/09/91	0.732	0.00 >	100.00	0.00	0.00
8567 76		31X MT2	01/09/91	1.369	0.00 >	100.00	0.00	0.00
8568 76		31H CEM	01/09/91	0.732	0.00 >	100.00	0.00 >	0.02
8568 76		31X MT2	01/09/91	1.369	0.00 >	100.00	0.00	0.00
8569 76		31I CEM	01/09/91	0.699	0.00	15.50	0.00	0.00
8569 76		31Y MT2	01/09/91	1.406	0.00	13.60	0.00	0.00
8570 76		31I CEM	01/09/91	0.699	0.00	8.43	0.00	0.00
8570 76		31Y MT2	01/09/91	1.406	0.00	15.50	0.00	0.00
8571 76		31J CEM	01/09/91	0.723	0.00 >	100.00	0.00 >	1.59
8571 76		31Z MT2	01/09/91	1.363	0.00	15.50	0.00 >	0.03
8572 76		31J CEM	01/09/91	0.738	0.00	12.90	0.00 >	3.02
8572 76		31Z MT2	01/09/91	1.343	0.00	8.24	0.00	0.00
8573 76		31K CEM	01/09/91	0.710	0.00	33.70	0.00	0.00
8573 76		31O MT2	01/09/91	1.372	0.00	10.00	0.00	0.00
8574 76		31K CEM	01/09/91	0.710	0.00	46.00	0.00	0.00
8574 76		31O MT2	01/09/91	1.372	0.00	21.80	0.00	0.15
8575 76		31L CEM	01/09/91	0.551	0.00	32.00	0.00	0.00
8575 76		31L MT2	01/09/91	1.136	0.00	7.35	0.00	0.20
8576 76		31L CEM	01/09/91	0.551	0.00	41.90	0.00	0.00
8576 76		31L MT2	01/09/91	1.136	0.00	50.90	0.00	0.85
8577 76		31M CEM	01/09/91	0.769	0.00	2.10	0.00 >	0.33
8577 76		312 MT2	01/09/91	1.271	0.00	16.70	0.00	0.00
8578 76		31M CEM	01/09/91	0.769	0.00	10.00	0.00	0.00
8578 76		312 MT2	01/09/91	1.271	0.00	7.28	0.00	0.00
8579 76		31N CEM	01/09/91	0.715	0.00	8.51	0.00	3.71
8579 76		313 MT2	01/09/91	1.340	0.00	16.30	0.00	0.44
8580 76		31N CEM	01/09/91	0.715	0.00	37.40	0.00	0.00
8580 76		313 MT2	01/09/91	1.340	0.00	17.90	0.00	0.29
8581 76		31O CEM	01/09/91	0.726	0.00	29.30	0.00	0.11
8581 76		314 MT2	01/09/91	1.313	0.00	7.45	0.00	0.21
8582 76		31O CEM	01/09/91	0.726	0.00	14.80	0.00	0.00
8582 76		314 MT2	01/09/91	1.313	0.00	34.40	0.00	0.00
8583 76		31P CEM	01/09/91	0.694	0.00	3.20	0.00	0.00
8583 76		315 MT2	01/09/91	1.353	0.00	5.82	0.00	0.32
8584 76		31P CEM	01/09/91	0.694	0.00	20.30	0.00	0.00
8584 76		315 MT2	01/09/91	1.353	0.00	5.82	0.00	0.00
8585 76		31Q CEM	01/09/91	0.643	0.00	29.30	0.00	4.63
8585 76		316 MT2	01/09/91	1.328	0.00	80.60	0.00	0.45
8586 76		31Q CEM	01/09/91	0.643	0.00	2.41	0.00	0.00
8586 76		316 MT2	01/09/91	1.328	0.00	15.50	0.00	0.52
8587 76		31R CEM	01/09/91	0.655	0.00	61.80	0.00	0.00
8587 76		317 MT2	01/09/91	1.332	0.00	42.60	0.00	0.17
8588 76		318 CEM	01/09/91	0.655	0.00	48.30	0.00	0.00
8588 76		317 MT2	01/09/91	1.332	0.00	55.20	0.00	0.00
8589 76		318 CEM	01/11/91	0.711	0.00	8.68	0.00	1.55
8589 76		319 MT2	01/11/91	1.333	0.00	6.54	0.00	0.00
8590 76		318 CEM	01/11/91	0.711	0.00	20.10	0.00	0.00
8590 76		320 MT2	01/11/91	1.333	0.00	3.85	0.00	0.00

## CUMULATIVE SUMMARY (cont'd)

AVS No.	Ship- ment	Plt #	Cell Line	Test Date	Diff- mtl.	IC 50	TC 25	\$1	TAI
8591	76	3L9	CEM	01/11/91	0.829	0.00	19.70	0.00	> 1.59
8591	76	3K0	MT2	01/11/91	1.293	0.00	28.10	0.00	0.00
8592	76	3L9	CEM	01/11/91	0.829	0.00	100.00	0.00	0.00
8592	76	3K0	MT2	01/11/91	1.293	0.00	44.80	0.00	0.00
8593	76	3LA	CEM	01/11/91	0.765	0.00	0.32	0.00	5.78
8593	76	3KP	MT2	01/11/91	1.260	0.00	16.80	0.00	0.00
8594	76	3LA	CEM	01/11/91	0.765	0.00	> 100.00	0.00	> 2.71
8594	76	3KP	MT2	01/11/91	1.260	0.00	> 100.00	0.00	0.00
8595	76	3LB	CEM	01/11/91	0.706	0.00	59.20	0.00	0.00
8595	76	3K0	MT2	01/11/91	1.218	0.00	30.60	0.00	0.00
8596	76	3LB	CEM	01/11/91	0.706	0.00	> 100.00	0.00	0.25
8596	76	3KC	MT2	01/11/91	1.218	0.00	> 100.00	0.00	0.00
8597	76	3LC	CEM	01/11/91	0.711	0.00	> 100.00	0.00	1.95
8597	76	3CR	MT2	01/11/91	1.270	0.00	> 100.00	0.00	0.00
8598	76	3LC	CEM	01/11/91	0.711	0.00	1.03	0.00	> 0.29
8598	76	3CR	MT2	01/11/91	1.270	0.00	1.06	0.00	0.00
8599	76	3LD	CEM	01/11/91	0.684	0.00	> 100.00	0.00	0.00
8599	76	3LG	MT2	01/11/91	1.288	0.00	> 100.00	0.00	0.08
8600	76	3LD	CEM	01/11/91	0.684	0.00	> 100.00	0.00	1.67
8600	76	3KS	MT2	01/11/91	1.288	0.00	> 100.00	0.00	0.00
8601	76	3LE	CEM	01/11/91	0.780	0.00	33.80	0.00	> 4.21
8601	76	3KT	MT2	01/11/91	1.262	0.00	43.10	0.00	0.15
8602	76	3LE	CEM	01/11/91	0.780	0.00	28.50	0.00	1.01
8602	76	3KT	MT2	01/11/91	1.262	0.00	20.20	0.00	0.00
8603	76	3LF	CEM	01/11/91	0.754	0.00	> 100.00	0.00	1.80
8603	76	3KU	MT2	01/11/91	1.251	0.00	> 100.00	0.00	> 2.16
8604	76	3LF	CEM	01/11/91	0.754	0.00	> 100.00	0.00	0.56
8604	76	3KU	MT2	01/11/91	1.251	0.00	> 100.00	0.00	0.00
8605	76	3LG	CEM	01/11/91	0.812	0.00	16.80	0.00	> 1.36
8605	76	3KV	MT2	01/11/91	1.236	0.00	11.80	0.00	0.00
8606	76	3LG	CEM	01/11/91	0.812	0.00	> 100.00	0.00	0.97
8606	76	3KV	MT2	01/11/91	1.236	0.00	> 100.00	0.00	0.00
8607	76	3LM	CEM	01/11/91	0.709	0.00	> 100.00	0.00	2.55
8607	76	3KW	MT2	01/11/91	1.289	0.00	> 100.00	0.00	0.00
8608	76	3LM	CEM	01/11/91	0.709	0.00	91.50	0.00	> 1.85
8608	76	3KW	MT2	01/11/91	1.289	0.00	> 100.00	0.00	0.00
8609	76	3LI	CEM	01/11/91	0.800	0.00	3.81	0.00	4.82
8609	76	3KU	MT2	01/11/91	1.280	0.00	> 100.00	0.00	0.00
8610	76	3LI	CEM	01/11/91	0.800	0.00	> 100.00	0.00	3.94
8610	76	3KU	MT2	01/11/91	1.280	0.00	> 100.00	0.00	0.00
8611	76	3LJ	CEM	01/11/91	0.684	0.00	31.20	0.00	0.00
8611	76	3KV	MT2	01/11/91	1.263	0.00	> 100.00	0.00	0.00
8612	76	3LJ	CEM	01/11/91	0.684	0.00	> 100.00	0.00	1.86
8611	76	3KV	MT2	01/11/91	1.263	0.00	> 100.00	0.00	0.00
8613	76	3LK	CEM	01/11/91	0.657	0.00	> 100.00	0.00	6.81
8613	76	3KZ	MT2	01/11/91	1.235	0.00	> 100.00	0.00	0.00
8614	76	3LK	CEM	01/11/91	0.657	0.00	9.06	0.00	0.00
8614	76	3KZ	MT2	01/11/91	1.235	0.00	3.49	0.00	0.00
8615	76	3LL	CEM	01/11/91	0.665	0.00	15.90	0.00	0.00
8615	76	3LO	MT2	01/11/91	1.274	0.00	13.00	0.00	0.00
8616	76	3LL	CEM	01/11/91	0.665	0.00	0.17	0.00	0.00
8616	76	3LO	MT2	01/11/91	1.274	0.00	8.80	0.00	0.00
8617	76	3LM	CEM	01/11/91	0.776	0.00	3.20	0.00	0.25
8617	76	3L1	MT2	01/11/91	1.233	0.00	> 100.00	0.00	0.00
8618	76	3LM	CEM	01/11/91	0.776	0.00	3.68	0.00	0.00
8618	76	3L1	MT2	01/11/91	1.233	0.00	0.89	0.00	0.00
8619	76	3LN	CEM	01/11/91	0.689	0.00	4.75	0.00	> 4.97
8619	76	3L2	MT2	01/11/91	1.270	0.00	2.28	0.00	0.00
8620	76	3LN	CEM	01/11/91	0.689	0.00	3.54	0.00	0.00
8620	76	3L2	MT2	01/11/91	1.270	0.00	3.67	0.00	0.00
8621	76	3LO	CEM	01/11/91	0.745	0.00	2.19	0.00	> 0.12
8621	76	3L3	MT2	01/11/91	1.331	0.00	0.61	0.00	0.00
8622	76	3LO	CEM	01/11/91	0.745	0.00	3.20	0.00	0.00
8622	76	3L3	MT2	01/11/91	1.331	0.00	1.92	0.00	0.00
8623	76	3LP	CEM	01/11/91	0.749	0.00	> 100.00	0.00	7.44
8623	76	3L4	MT2	01/11/91	1.282	0.00	> 100.00	0.00	0.00
8624	76	3LP	CEM	01/11/91	0.749	0.00	3.20	0.00	2.69
8624	76	3L4	MT2	01/11/91	1.282	0.00	> 100.00	0.00	0.00
8625	76	3LQ	CEM	01/11/91	0.662	0.00	> 100.00	0.00	6.61
8625	76	3L5	MT2	01/11/91	1.229	0.00	> 100.00	0.00	0.00
8626	76	3LG	CEM	01/11/91	0.662	0.00	38.60	0.00	> 1.32
8626	76	3L5	MT2	01/11/91	1.229	0.00	1.73	0.00	0.00
8627	76	671	CEM	01/29/91	0.790	0.00	21.70	0.00	1.62
8627	76	671	MT2	01/29/91	1.439	0.00	10.60	0.00	0.00
8628	76	671	CEM	01/29/91	0.790	0.00	43.20	0.00	1.27
8628	76	671	MT2	01/29/91	1.439	0.00	> 100.00	0.00	0.00
8629	76	671	CEM	01/29/91	0.892	0.00	10.00	0.00	> 3.91
8629	76	671	MT2	01/29/91	1.382	0.00	4.11	0.00	0.00

## CUMULATIVE SUMMARY (cont'd)

AVB	Ship-	Plt	Call	Test	Diff-		IC	50	TC	25	\$1	TAI
No.	ment	#	Line	Date	mtl.							
8630	76	47J	CEM	01/29/91	0.892		0.00		13.34		0.00	2.88
8630	76	44Z	MT2	01/29/91	1.382		0.00		7.66		0.00	0.00
8631	76	47K	CEM	01/29/91	0.827		0.00		100.00		0.00	2.68
8631	76	47G	MT2	01/29/91	1.443		0.00		100.00		0.00	0.00
8632	76	47K	CEM	01/29/91	0.827		0.00		100.00		0.00	2.44
8632	76	47O	MT2	01/29/91	1.443		0.00		100.00		0.00	0.00
8633	76	47L	CEM	01/29/91	0.861		0.00		100.00		0.00	1.25
8633	76	47I	MT2	01/29/91	1.388		0.00		100.00		0.00	0.27
8634	76	47L	CEM	01/29/91	0.861		0.00		100.00		0.00	1.87
8634	76	47I	MT2	01/29/91	1.388		0.00		100.00		0.00	0.22
8635	76	47M	CEM	01/29/91	0.653		0.00		100.00		0.00	4.76
8635	76	47Z	MT2	01/29/91	1.381		0.00		100.00		0.00	0.00
8636	76	47N	CEM	01/29/91	0.653		0.00		4.90		0.00	1.19
8636	76	47Z	MT2	01/29/91	1.381		0.00		4.58		0.00	0.00
8637	76	47N	CEM	01/29/91	0.807		0.00		7.67		0.00	3.02
8637	76	47S	MT2	01/29/91	0.810		0.00		7.92		0.00	2.89
8638	76	47I	CEM	01/29/91	0.807		0.00		13.60		0.00	0.00
8638	76	47S	MT2	01/29/91	0.810		0.00		13.50		0.00	0.06
8639	76	47O	CEM	01/29/91	0.771		0.00		69.80		0.00	1.79
8639	76	47S	MT2	01/29/91	0.781		0.00		54.75		0.00	1.15
8640	76	47O	CEM	01/29/91	0.771		0.00		5.05		0.00	0.00
8640	76	47S	MT2	01/29/91	0.781		0.00		5.20		0.00	0.00
8641	76	47P	CEM	01/29/91	0.801		0.00		4.37		0.00	1.03
8641	76	47S	MT2	01/29/91	1.422		0.00		1.68		0.00	0.00
8642	76	47P	CEM	01/29/91	0.801		0.00		6.37		0.00	1.29
8642	76	47S	MT2	01/29/91	1.422		0.00		100.00		0.00	0.00
8643	76	47R	CEM	01/29/91	0.771		0.00		10.00		0.00	2.99
8643	76	47S	MT2	01/29/91	1.382		0.00		3.76		0.00	0.00
8644	76	47R	CEM	01/29/91	0.771		0.00		100.00		0.00	0.82
8644	76	47S	MT2	01/29/91	1.382		0.00		100.00		0.00	0.73
8645	76	47T	CEM	01/29/91	0.820		0.00		49.00		0.00	0.25
8645	76	47T	MT2	01/29/91	0.848		0.00		50.80		0.00	0.25
8646	76	47R	CEM	01/29/91	0.820		0.00		5.41		0.00	0.28
8646	76	47T	MT2	01/29/91	0.848		0.00		6.62		0.00	0.00
8647	76	47S	CEM	01/29/91	0.832		0.00		100.00		0.00	5.43
8647	76	47S	MT2	01/29/91	0.863		0.00		100.00		0.00	7.01
8648	76	47S	CEM	01/29/91	0.862		0.00		100.00		0.00	2.85
8648	76	47S	MT2	01/29/91	0.863		0.00		100.00		0.00	3.10
8649	76	47T	CEM	01/29/91	0.842		0.00		59.70		0.00	0.00
8649	76	47S	MT2	01/29/91	0.852		0.00		63.40		0.00	0.00
8650	76	47U	CEM	01/29/91	0.842		0.00		100.00		0.00	0.00
8650	76	47V	MT2	01/29/91	0.852		0.00		100.00		0.00	0.00
8651	76	47U	CEM	01/29/91	0.814		0.00		100.00		0.00	0.50
8651	76	47A	MT2	01/29/91	0.823		0.00		100.00		0.00	0.48
8652	76	47U	CEM	01/29/91	0.814		0.00		100.00		0.00	5.82
8652	76	47A	MT2	01/29/91	0.823		0.00		100.00		0.00	6.64
8653	76	47V	CEM	01/29/91	0.739		0.00		5.82		0.00	5.25
8653	76	47B	MT2	01/29/91	0.760		0.00		5.70		0.00	5.17
8654	76	47V	CEM	01/29/91	0.739		0.00		18.90		0.00	4.89
8654	76	47B	MT2	01/29/91	0.760		0.00		18.80		0.00	4.97
8655	76	47W	CEM	01/29/91	0.743		0.00		15.40		0.00	3.20
8655	76	47C	MT2	01/29/91	0.751		0.00		15.40		0.00	2.70
8656	76	47W	CEM	01/29/91	0.743		0.00		5.94		0.00	1.77
8656	76	47C	MT2	01/29/91	0.751		0.00		6.08		0.00	1.52
8657	76	47X	CEM	01/29/91	0.825		0.00		100.00		0.00	8.35
8657	76	47D	MT2	01/29/91	0.841		0.00		100.00		0.00	9.89
8658	76	47X	CEM	01/29/91	0.825		0.00		19.20		0.00	5.99
8658	76	47D	MT2	01/29/91	0.841		0.00		18.90		0.00	6.06
8659	76	47Y	CEM	01/29/91	0.886		0.00		62.00		0.00	0.00
8659	76	47Z	MT2	01/29/91	0.908		0.00		61.80		0.00	0.00
8660	76	47Y	CEM	01/29/91	0.880		0.00		24.40		0.00	0.00
8660	76	47E	MT2	01/29/91	0.908		0.00		24.10		0.00	0.00
8661	76	47Z	CEM	01/29/91	0.843		0.00		100.00		0.00	0.82
8661	76	47F	MT2	01/29/91	0.867		0.00		100.00		0.00	0.71
8662	76	47Z	CEM	01/29/91	0.843		0.00		5.47		0.00	0.83
8662	76	47F	MT2	01/29/91	0.867		0.00		5.60		0.00	0.56
8663	76	48Q	CEM	01/29/91	0.892		0.00		8.30		0.00	0.00
8663	76	47G	MT2	01/29/91	0.921		0.00		8.80		0.00	0.00
8664	76	48Q	CEM	01/29/91	0.892		0.00		100.00		0.00	0.31
8664	76	47G	MT2	01/29/91	0.921		0.00		79.60		0.00	0.01
8665	76	48M	CEM	01/31/91	0.944	44.80	>	100.00		2.23	>	13.68
8665	76	482	MT2	01/31/91	1.448		0.00		100.00		0.00	1.39
8666	76	48M	CEM	01/31/91	0.944		0.00		100.00		0.00	1.26
8666	76	482	MT2	01/31/91	1.448		0.00		100.00		0.00	0.00
8667	76	48M	CEM	01/31/91	0.914		0.00		100.00		0.00	1.31
8667	76	483	MT2	01/31/91	1.458		0.00		81.90		0.00	0.00
8668	76	48M	CEM	01/31/91	0.914		0.00		100.00		0.00	0.71
8668	76	483	MT2	01/31/91	1.458		0.00		100.00		0.00	0.00

## CUMULATIVE SUMMARY (cont'd)

AVS No.	Ship- ment	Pkt #	Cell Line	Test Date	Diff- mtl.	IC 50	TC 25	\$1	TAI
8649	76	480	CEN	01/31/91	0.959	0.00	3.64	0.00	0.00
8649	76	484	MT2	01/31/91	1.484	0.00	> 100.00	0.00	0.00
8670	76	480	CEN	01/31/91	0.959	0.00	0.66	0.00	0.00
8670	76	484	MT2	01/31/91	1.484	0.00	70.10	0.00	0.10
8671	76	480	CEN	01/31/91	0.894	0.00	> 100.00	0.00	0.00
8671	76	484	MT2	01/31/91	1.441	0.00	41.40	0.00	0.00
8672	76	480	CEN	01/31/91	0.894	0.00	> 100.00	0.00	0.00
8672	76	484	MT2	01/31/91	1.441	0.00	> 100.00	0.00	0.00
8673	76	480	CEN	01/31/91	0.917	0.00	54.70	0.00	> 0.99
8673	76	484	MT2	01/31/91	1.462	0.00	> 100.00	0.00	0.00
8674	76	480	CEN	01/31/91	0.917	0.00	> 100.00	0.00	0.00
8674	76	484	MT2	01/31/91	1.462	0.00	> 100.00	0.00	0.00
8675	76	480	CEN	01/31/91	0.876	0.00	> 100.00	0.00	0.25
8675	76	484	MT2	01/31/91	1.442	0.00	89.10	0.00	0.00
8676	76	480	CEN	01/31/91	0.876	0.00	> 100.00	0.00	0.00
8676	76	484	MT2	01/31/91	1.442	0.00	> 100.00	0.00	> 0.10
8677	76	480	CEN	01/31/91	0.916	0.00	44.40	0.00	0.00
8677	76	484	MT2	01/31/91	1.446	0.00	> 100.00	0.00	0.00
8678	76	480	CEN	01/31/91	0.916	0.00	> 100.00	0.00	0.00
8678	76	484	MT2	01/31/91	1.446	0.00	> 100.00	0.00	0.00
8679	76	480	CEN	01/31/91	0.877	0.00	25.80	0.00	0.00
8679	76	484	MT2	01/31/91	1.454	0.00	> 100.00	0.00	0.00
8680	76	480	CEN	01/31/91	0.877	0.00	72.80	0.00	0.00
8680	76	484	MT2	01/31/91	1.454	0.00	6.36	0.00	0.00
8681	76	480	CEN	01/31/91	0.790	0.00	0.71	0.00	> 0.57
8681	76	484	MT2	01/31/91	1.487	0.00	> 100.00	0.00	0.00
8682	76	480	CEN	01/31/91	0.790	0.00	0.32	0.00	0.00
8682	76	484	MT2	01/31/91	1.487	0.00	> 100.00	0.00	0.00
8683	76	480	CEN	01/31/91	0.760	0.00	> 100.00	0.00	0.00
8683	76	484	MT2	01/31/91	1.418	0.00	> 100.00	0.00	0.00
8684	76	480	CEN	01/31/91	0.760	0.00	20.40	0.00	0.00
8684	76	484	MT2	01/31/91	1.418	0.00	> 100.00	0.00	0.00
8685	76	480	CEN	01/31/91	0.716	0.00	> 100.00	0.00	0.00
8685	76	484	MT2	01/31/91	1.397	0.00	> 100.00	0.00	0.00
8686	76	480	CEN	01/31/91	0.716	0.00	41.40	0.00	0.00
8686	76	484	MT2	01/31/91	1.397	0.00	41.10	0.00	0.00
8687	76	480	CEN	01/31/91	0.761	0.00	> 100.00	0.00	0.00
8687	76	484	MT2	01/31/91	1.186	0.00	> 100.00	0.00	> 2.19
8688	76	480	CEN	01/31/91	0.761	0.00	91.50	0.00	0.00
8688	76	484	MT2	01/31/91	1.186	0.00	> 100.00	0.00	> 0.60
8689	76	480	CEN	01/31/91	0.632	0.00	> 100.00	0.00	> 9.00
8689	76	484	MT2	01/31/91	1.378	0.00	18.30	0.00	0.00
8690	76	480	CEN	01/31/91	0.632	0.00	> 100.00	0.00	2.84
8690	76	484	MT2	01/31/91	1.378	0.00	> 100.00	0.00	0.00
8691	76	480	CEN	01/31/91	0.785	0.00	10.00	0.00	0.01
8691	76	484	MT2	01/31/91	1.418	0.00	34.80	0.00	0.00
8692	76	480	CEN	01/31/91	0.785	0.00	> 100.00	0.00	> 0.64
8692	76	484	MT2	01/31/91	1.418	0.00	> 100.00	0.00	0.04
8693	76	480	CEN	01/31/91	0.713	0.00	> 100.00	0.00	0.00
8693	76	484	MT2	01/31/91	1.363	0.00	> 100.00	0.00	> 0.40
8694	76	480	CEN	01/31/91	0.713	0.00	66.00	0.00	0.00
8694	76	484	MT2	01/31/91	1.363	0.00	13.40	0.00	0.13
8695	76	491	CEN	01/31/91	0.745	0.00	> 100.00	0.00	1.16
8695	76	484	MT2	01/31/91	1.414	0.00	> 100.00	0.00	0.00
8696	76	491	CEN	01/31/91	0.745	0.00	> 100.00	0.00	> 0.42
8696	76	484	MT2	01/31/91	1.414	0.00	6.00	0.00	0.00
8697	76	492	CEN	01/31/91	0.793	0.00	95.80	0.00	0.00
8697	76	481	MT2	01/31/91	1.611	0.00	> 100.00	0.00	0.00
8698	76	492	CEN	01/31/91	0.793	0.00	> 100.00	0.00	2.31
8698	76	481	MT2	01/31/91	1.611	0.00	> 100.00	0.00	0.00
8699	76	493	CEN	01/31/91	0.741	0.00	> 100.00	0.00	> 9.18
8699	76	481	MT2	01/31/91	1.427	0.00	52.70	0.00	0.00
8700	76	493	CEN	01/31/91	0.741	0.00	> 100.00	0.00	0.07
8700	76	484	MT2	01/31/91	1.427	0.00	> 100.00	0.00	> 0.10
8701	76	494	CEN	01/31/91	0.794	< 0.32	> 100.00	> 312.50	> 86.73
8701	76	488	MT2	01/31/91	1.423	< 0.32	> 100.00	> 312.50	> 95.21
8702	76	494	CEN	01/31/91	0.794	< 0.32	> 100.00	> 312.50	> 96.33
8702	76	488	MT2	01/31/91	1.423	< 0.32	> 100.00	> 312.50	> 92.21
8704	76	317	CEN	01/08/91	0.655	0.00	> 100.00	0.00	1.44
8704	76	349	MT2	01/08/91	1.299	0.00	> 100.00	0.00	0.00
8705	27A	308	CEN	01/21/91	0.643	0.00	> 100.00	0.00	> 3.74
8705	27A	302	MT2	01/21/91	1.326	0.00	> 100.00	0.00	> 2.10
8706	27A	308	CEN	01/21/91	0.643	0.00	> 100.00	0.00	> 3.20
8706	27A	302	MT2	01/21/91	1.324	0.00	> 100.00	0.00	> 0.78
8707	27A	307	CEN	01/21/91	0.861	0.00	6.41	0.00	2.63
8707	27A	303	MT2	01/21/91	1.362	0.00	15.20	0.00	0.00
8708	27A	307	CEN	01/21/91	0.861	0.00	90.30	0.00	> 5.31
8708	27A	303	MT2	01/21/91	1.342	0.00	51.80	0.00	0.40

## CUMULATIVE SUMMARY (cont'd)

AVB	Ship- ment	Plt Call # Line	Test Date	Diff- mtl.	IC 50	TC 25	SI	TAI
8709	27A	30J CEM	01/21/91	0.976	0.00	23.20	0.00	0.00
8709	27A	30S MT2	01/21/91	1.407	0.00	> 100.00	0.00	1.50
8710	27A	30J CEM	01/21/91	0.976	0.00	13.60	0.00	3.17
8710	27A	30S MT2	01/21/91	1.407	0.00	16.30	0.00	1.40
8711	27A	30V CEM	01/21/91	0.915	0.00	< 0.32	0.00	0.00
8711	27A	40W CEM	02/22/91	0.682	0.00	0.03	0.00	0.29
8711	27A	30S MT2	01/21/91	1.375	0.00	0.62	0.00	0.00
8711	27A	40W MT2	02/22/91	1.285	0.00	0.23	0.00	0.40
8712	27A	30V CEM	01/21/91	0.915	0.00	18.90	0.00	4.60
8712	27A	30S MT2	01/21/91	1.375	0.00	34.40	0.00	0.90
8713	27A	30V CEM	01/21/91	0.907	0.00	1.80	0.00	2.26
8713	27A	40Z MT2	02/21/91	0.944	0.00	0.38	0.00	0.00
8714	27A	30V CEM	01/21/91	0.907	0.00	> 100.00	0.00	3.45
8714	27A	30S MT2	01/21/91	0.726	0.00	> 100.00	0.00	4.75
8715	27A	30X CEM	01/21/91	0.913	0.00	4.68	0.00	3.09
8715	27A	30T MT2	01/21/91	1.381	0.00	5.12	0.00	0.61
8716	27A	30X CEM	01/21/91	0.913	0.00	> 100.00	0.00	2.70
8716	27A	30T MT2	01/21/91	1.381	0.00	> 100.00	0.00	0.82
8717	27A	30V CEM	01/21/91	0.834	0.00	51.30	0.00	2.03
8717	27A	30B MT2	01/21/91	1.370	0.00	19.40	0.00	1.75
8718	27A	30V CEM	01/21/91	0.834	0.00	> 100.00	0.00	0.00
8718	27A	30B MT2	01/21/91	1.370	0.00	> 100.00	0.00	1.00
8719	27A	30Z CEM	01/21/91	0.904	27.10	> 100.00	> 3.60	24.91
8719	27A	40B CEM	02/21/91	0.833	0.00	403.00	0.00	8.80
8719	27A	309 MT2	01/21/91	1.383	2.32	> 100.00	> 43.17	48.89
8720	27A	30Z CEM	01/21/91	0.904	4.25	> 100.00	> 23.50	54.25
8720	27A	40B CEM	02/21/91	0.833	6.52	67.40	10.34	34.53
8720	27A	309 MT2	01/21/91	1.383	6.32	> 100.00	> 15.82	48.30
8721	27A	30O CEM	01/21/91	0.970	0.00	54.70	0.00	2.78
8721	27A	30A MT2	01/21/91	1.404	0.00	> 100.00	0.00	1.50
8722	27A	30O CEM	01/21/91	0.970	22.60	45.90	2.04	12.98
8722	27A	409 CEM	02/21/91	0.911	39.60	> 100.00	> 2.52	11.42
8722	27A	30A MT2	01/21/91	1.404	0.00	> 100.00	0.00	0.10
8723	27A	301 CEM	01/21/91	0.943	0.00	54.70	0.00	0.00
8723	27A	30B MT2	01/21/91	1.363	0.00	> 100.00	0.00	2.00
8724	27A	301 CEM	01/21/91	0.943	0.03	> 100.30	0.00	7.30
8724	27A	30B MT2	01/21/91	1.363	0.00	> 100.00	0.00	3.30
8725	27A	302 CEM	01/21/91	1.027	0.00	13.00	0.00	0.00
8725	27A	30C MT2	01/21/91	1.389	0.00	21.70	0.00	2.31
8726	27A	302 CEM	01/21/91	1.027	0.00	86.80	0.00	2.12
8726	27A	30C MT2	01/21/91	1.389	0.00	> 100.00	0.00	0.50
8727	27A	303 CEM	01/21/91	0.884	0.00	32.00	0.00	1.66
8727	27A	303 MT2	01/21/91	1.389	0.00	> 100.00	0.00	0.00
8728	27A	303 CEM	01/21/91	0.884	0.00	> 100.00	0.00	4.35
8728	27A	303 MT2	01/21/91	1.389	0.00	> 100.00	0.00	0.34
8729	27A	304 CEM	01/21/91	0.970	0.00	32.00	0.00	0.00
8729	27A	30E MT2	01/21/91	1.322	0.00	> 100.00	0.00	0.15
8730	27A	304 CEM	01/21/91	0.970	0.00	93.20	0.00	0.00
8730	27A	30E MT2	01/21/91	1.322	0.00	> 100.00	0.00	0.03
8731	27A	305 CEM	01/21/91	1.176	0.00	21.00	0.00	0.76
8731	27A	30F MT2	01/21/91	1.390	0.00	> 100.00	0.00	0.11
8732	27A	305 CEM	01/21/91	1.176	0.00	> 100.00	0.00	5.24
8732	27A	30F MT2	01/21/91	1.390	0.00	> 100.00	0.00	0.30
8733	27A	306 CEM	01/21/91	1.032	0.00	22.20	0.00	0.00
8733	27A	306 MT2	01/21/91	1.386	0.00	> 100.00	0.00	1.65
8734	27A	306 CEM	01/21/91	1.032	0.00	4.98	0.00	1.42
8734	27A	30G MT2	01/21/91	1.386	0.00	3.74	0.00	0.02
8735	27A	307 CEM	01/21/91	0.948	0.00	5.02	0.00	1.94
8735	27A	30H MT2	01/21/91	1.373	0.00	11.60	0.00	0.06
8736	27A	307 CEM	01/21/91	0.948	0.00	1.79	0.00	0.00
8736	27A	30M MT2	01/21/91	1.373	0.00	1.50	0.00	0.00
8737	27A	306 CEM	01/21/91	0.949	0.00	62.90	0.00	0.00
8737	27A	301 MT2	01/21/91	1.354	0.00	> 100.00	0.00	2.10
8738	27A	308 CEM	01/21/91	0.949	0.00	66.00	0.00	0.32
8738	27A	301 MT2	01/21/91	1.354	0.00	> 100.00	0.00	1.95
8739	27A	309 CEM	01/21/91	0.943	0.00	42.30	0.00	0.00
8739	27A	30J MT2	01/21/91	1.273	0.00	43.30	0.00	0.00
8740	27A	309 CEM	01/21/91	0.943	0.00	10.40	0.00	0.00
8740	27A	30J MT2	01/21/91	1.273	0.00	6.90	0.00	0.52
8741	27A	30A CEM	01/21/91	0.881	0.00	100.00	0.00	0.58
8741	27A	30K MT2	01/21/91	1.339	0.00	> 100.00	0.00	0.00
8742	27A	30A CEM	01/21/91	0.881	0.00	57.50	0.00	0.00
8742	27A	30K MT2	01/21/91	1.339	0.00	61.30	0.00	0.74
8743	27A	30B CEM	01/21/91	0.874	0.00	100.00	0.00	2.06
8743	27A	30L MT2	01/21/91	1.273	0.00	> 100.00	0.00	0.70
8744	27A	30B CEM	01/21/91	0.874	0.00	54.90	0.00	0.36
8744	27A	30L MT2	01/21/91	1.273	0.00	62.40	0.00	3.15
8745	27A	30C CEM	01/21/91	1.000	0.00	1.82	0.00	0.60

## Cumulative Summary (cont'd)

AVS	Ship- ment	Pit Cell # Line	Test Date	Diff- mtl.	IC SC	TC 25	SI	TAT
8745	27A	300 MT2	01/21/91	1.276	0.00	1.43	0.00 >	0.04
8746	27A	34C CEM	01/21/91	1.000	0.00	95.00	0.00 >	0.12
8746	27A	30M MT2	01/21/91	1.276	0.00	80.00	0.00 >	0.47
8747	27A	34D CEM	01/21/91	0.927	0.00	94.00	0.00	0.00
8747	27A	30M MT2	01/21/91	1.231	0.00 >	100.00	0.00 >	1.08
8748	27A	34D CEM	01/21/91	0.927	0.30 >	100.00	0.00	3.42
8748	27A	30M MT2	01/21/91	1.231	0.00 >	100.00	0.00	0.92
8749	27A	34E CEM	01/21/91	0.914	0.00 >	100.00	0.00 >	2.19
8749	27A	300 MT2	01/21/91	1.286	0.00 >	100.00	0.00 >	0.12
8750	27A	34E CEM	01/21/91	0.914	0.00 >	100.00	0.00 >	1.50
8750	27A	300 MT2	01/21/91	1.286	0.00 >	100.00	0.00 >	0.70
8751	27A	34F CEM	01/21/91	0.914	0.00	19.80	0.00	0.00
8751	27A	30P MT2	01/21/91	1.307	0.00	4.88	0.00	0.00
8752	27A	34F CEM	01/21/91	0.914	0.00	100.00	0.00	4.03
8752	27A	30P MT2	01/21/91	1.307	0.00	62.90	0.00 >	1.20
8753	27A	34G CEM	01/21/91	1.093	0.00	40.80	0.00	5.90
8753	27A	30B MT2	01/21/91	1.309	0.00 >	100.00	0.00 >	1.90
8754	27A	34G CEM	01/21/91	1.093	3.20	83.00	25.94 >	16.84
8754	27A	30B MT2	01/21/91	1.309	0.30 >	100.00	0.00 >	2.50
8755	27A	42X CEM	01/22/91	0.569	0.00	53.40	0.00	3.23
8755	27A	440 MT2	01/22/91	1.282	0.00 >	100.00	0.00	0.00
8756	27A	42X CEM	01/22/91	0.569	0.00 >	100.00	0.00	7.59
8756	27A	440 MT2	01/22/91	1.282	0.00 >	100.00	0.00	0.00
8757	27A	42L CEM	01/22/91	0.452	0.00 >	100.00	0.00 >	3.67
8757	27A	441 MT2	01/22/91	1.347	0.00 >	100.00	0.00 >	0.85
8758	27A	42L CEM	01/22/91	0.452	0.00 >	100.00	0.00	0.80
8758	27A	441 MT2	01/22/91	1.347	0.00 >	100.00	0.00	0.40
8759	27A	42M CEM	01/22/91	0.639	0.00 >	100.00	0.00	9.55
8759	27A	442 MT2	01/22/91	1.270	0.00 >	100.00	0.00	3.60
8760	27A	42M CEM	01/22/91	0.639	0.00 >	100.00	0.00	13.64
8760	27A	442 MT2	01/22/91	1.270	0.00	100.00	0.00 >	0.35
8761	27A	42H CEM	01/22/91	0.569	0.00 >	100.00	0.00	7.36
8761	27A	443 MT2	01/22/91	1.228	0.00 >	100.00	0.00	3.65
8762	27A	42H CEM	01/22/91	0.569	0.00 >	100.00	0.00	0.23
8762	27A	443 MT2	01/22/91	1.228	0.00 >	100.00	0.00 >	1.61
8763	27A	42O CEM	01/22/91	0.542	0.00 >	100.00	0.00	0.00
8763	27A	444 MT2	01/22/91	1.243	0.00 >	100.00	0.00 >	1.49
8764	27A	42O CEM	01/22/91	0.542	0.00	5.00	0.00	0.00
8764	27A	444 MT2	01/22/91	1.243	0.00	4.85	0.00 >	0.90
8765	27A	42P CEM	01/22/91	0.707	0.00 >	100.00	0.00	0.64
8765	27A	409 CEM	02/21/91	0.911	0.00	206.00	0.00	0.00
8765	27A	445 MT2	01/22/91	1.203	< 0.32 >	100.00 >	312.50 >	96.81
8765	27A	42Z MT2	02/21/91	0.944	0.00 >	100.00	0.00 >	1.31
8766	27A	42P CEM	01/22/91	0.707	0.00	9.38	0.00 >	0.65
8766	27A	445 MT2	01/22/91	1.203	0.00	3.20	0.00 >	0.00
8767	27A	42Q CEM	01/22/91	0.641	0.00	2.49	0.00	3.09
8767	27A	446 MT2	01/22/91	1.157	0.00	2.72	0.00	0.07
8768	27A	429 CEM	01/22/91	0.641	0.00 <	0.32	0.00	0.00
8768	27A	408 CEM	02/22/91	0.682	0.00	0.02	0.00	0.00
8768	27A	446 MT2	01/22/91	1.157	0.00 <	0.32	0.00	0.00
8768	27A	40M MT2	02/22/91	1.205	0.00	0.04	0.00	0.73
8769	27A	428 CEM	01/22/91	0.557	0.00	67.00	0.00	6.21
8769	27A	447 MT2	01/22/91	1.240	0.00	67.20	0.00 >	0.28
8770	27A	42R CEM	01/22/91	0.557	0.00	88.70	0.00	7.21
8770	27A	447 MT2	01/22/91	1.240	0.00	76.70	0.00	0.09
8771	27A	42S CEM	01/22/91	0.634	0.00 >	100.00	0.00 >	1.15
8771	27A	448 MT2	01/22/91	1.131	0.00 >	100.00	0.00 >	0.14
8772	27A	42S CEM	01/22/91	0.634	0.00 >	100.00	0.00	0.12
8772	27A	40A CEM	02/21/91	0.901	0.00	135.00	0.00	2.71
8772	27A	448 MT2	01/22/91	1.131	< 0.32 >	100.00 >	312.50 >	92.11
8772	27A	400 MT2	02/21/91	1.272	0.00 >	100.00	0.00	0.64
8773	27A	42T CEM	01/22/91	0.669	0.00 >	100.00	0.00	0.00
8773	27A	449 MT2	01/22/91	1.183	0.00 >	100.00	0.00	2.54
8774	27A	421 CEM	01/22/91	0.669	0.00 >	100.00	0.00	6.79
8774	27A	449 MT2	01/22/91	1.180	0.00 >	100.00	0.00 >	1.43
8775	27A	42U CEM	01/22/91	0.635	0.00 >	100.00	0.00 >	5.70
8775	27A	44A MT2	01/22/91	1.151	0.00 >	100.00	0.00 >	0.15
8776	27A	42U CEM	01/22/91	0.635	0.00	3.46	0.00 >	7.29
8776	27A	44A MT2	01/22/91	1.151	0.00	1.96	0.00	0.00
8777	27A	42Y CEM	01/22/91	0.528	0.00	4.38	0.00	0.10
8777	27A	448 MT2	01/22/91	1.112	0.00	6.89	0.00	0.00
8778	27A	42Y CEM	01/22/91	0.528	0.00 >	100.00	0.00 >	5.42
8778	27A	440 MT2	01/22/91	1.112	0.00 >	100.00	0.00 >	0.28
8779	27A	42W CEM	01/22/91	0.542	0.00 >	100.00	0.00 >	4.30
8779	27A	44C MT2	01/22/91	1.155	0.00 >	100.00	0.00 >	2.54
8780	27A	42W CEM	01/22/91	0.542	0.00 >	100.00	0.00 >	1.49
8780	27A	44C MT2	01/22/91	1.155	0.00 >	100.00	0.00 >	0.76
8781	27A	42X CEM	01/22/91	0.580	0.00 >	100.00	0.00 >	3.85

## CUMULATIVE SUMMARY (cont'd)

AVB	Ship-	Pit Cell	Test	Date	0144-	TC 50	TC 25	\$1	TAI
No.	ment	# Line			mtl.				
8781	27A	440	NT2	01/22/91	0.996	0.00	> 100.00	0.00	> 1.40
8782	27A	421	CER	01/22/91	0.580	0.00	> 100.00	0.00	> 7.61
8783	27A	440	NT2	01/22/91	0.996	0.00	> 100.00	0.00	> 1.40
8783	27A	421	CER	01/22/91	0.573	0.00	> 100.00	0.00	> 1.40
8783	27A	440	NT2	01/22/91	1.157	0.00	> 100.00	0.00	> 3.44
8784	27A	421	CER	01/22/91	0.573	0.00	> 100.00	0.00	> 2.43
8784	27A	440	NT2	01/22/91	1.157	0.00	> 100.00	0.00	> 0.71
8785	27A	422	CER	01/22/91	0.600	0.00	> 100.00	0.00	> 1.19
8785	27A	440	NT2	01/22/91	1.220	0.00	> 100.00	0.00	> 1.47
8786	27A	422	CER	01/22/91	0.600	0.00	> 100.00	0.00	> 3.21
8786	27A	440	NT2	01/22/91	1.220	0.00	> 100.00	0.00	> 0.14
8787	27A	430	CER	01/22/91	0.716	0.00	> 100.00	0.00	> 6.36
8787	27A	440	NT2	01/22/91	1.142	0.00	> 100.00	0.00	> 3.43
8788	27A	450	CER	01/22/91	0.716	0.00	> 100.00	0.00	> 0.79
8788	27A	440	NT2	01/22/91	1.142	0.00	> 100.00	0.00	> 1.15
8789	27A	431	CER	01/22/91	0.630	0.00	> 91.80	0.00	> 0.05
8789	27A	440	NT2	01/22/91	0.915	0.00	> 100.00	0.00	> 0.00
8790	27A	431	CER	01/22/91	0.630	0.00	> 93.50	0.00	> 6.50
8790	27A	440	NT2	01/22/91	0.916	0.00	> 100.00	0.00	> 0.51
8791	27A	432	CER	01/22/91	0.642	0.00	> 100.00	0.00	> 5.98
8791	27A	441	NT2	01/22/91	1.100	0.00	> 100.00	0.00	> 3.40
8792	27A	432	CER	01/22/91	0.662	0.00	> 53.30	0.00	> 5.81
8792	27A	441	NT2	01/22/91	1.100	0.00	> 51.80	0.00	> 1.16
8793	27A	433	CER	01/22/91	0.589	0.00	> 100.00	0.00	> 8.00
8793	27A	441	NT2	01/22/91	1.112	0.00	> 100.00	0.00	> 1.70
8794	27A	433	CER	01/22/91	0.589	0.00	> 14.00	0.00	> 1.79
8794	27A	442	NT2	01/22/91	1.112	0.00	> 16.10	0.00	> 2.44
8795	27A	434	CER	01/22/91	0.552	0.00	> 23.40	0.00	> 1.10
8795	27A	444	NT2	01/22/91	0.966	0.00	> 5.95	0.00	> 0.58
8796	27A	434	CER	01/22/91	0.652	0.00	> 66.00	0.00	> 6.66
8796	27A	444	NT2	01/22/91	0.966	0.00	> 56.40	0.00	> 0.77
8797	27A	435	CER	01/22/91	0.666	0.00	> 57.50	0.00	> 1.39
8797	27A	441	NT2	01/22/91	1.143	0.00	> 6.60	0.00	> 0.00
8798	27A	435	CER	01/22/91	0.666	0.00	> 100.00	0.00	> 0.00
8798	27A	441	NT2	01/22/91	1.143	0.00	> 2.40	0.00	> 0.00
8799	27A	436	CER	01/22/91	0.668	0.00	> 55.10	0.00	> 3.41
8799	27A	448	NT2	01/22/91	1.229	0.00	> 39.20	0.00	> 3.00
8800	27A	436	CER	01/22/91	0.668	0.00	> 57.20	0.00	> 1.93
8800	27A	448	NT2	01/22/91	1.229	0.00	> 16.00	0.00	> 1.06
8801	27A	437	CER	01/22/91	0.601	0.00	> 49.70	0.00	> 1.13
8801	27A	444	NT2	01/22/91	1.097	0.00	> 29.00	0.00	> 3.59
8802	27A	437	CER	01/22/91	0.601	0.00	> 9.27	0.00	> 1.21
8802	27A	444	NT2	01/22/91	1.097	0.00	> 8.93	0.00	> 0.34
8803	27A	438	CER	01/22/91	0.588	0.00	> 100.00	0.00	> 14.20
8803	27A	440	NT2	01/22/91	1.153	0.00	> 18.00	0.00	> 3.74
8804	27A	438	CER	01/22/91	0.588	0.00	> 21.60	0.00	> 4.91
8804	27A	440	NT2	01/22/91	1.153	0.00	> 5.90	0.00	> 1.23
8805	27A	434	CER	01/22/91	0.557	0.00	> 15.50	0.00	> 4.13
8805	27A	449	NT2	01/22/91	1.031	0.00	> 10.50	0.00	> 2.67
8806	27A	434	CER	01/22/91	0.557	0.00	> 100.00	0.00	> 2.01
8806	27A	449	NT2	01/22/91	1.031	0.00	> 100.00	0.00	> 5.20
8807	27A	438	CER	01/22/91	0.595	0.00	> 15.50	0.00	> 5.10
8807	27A	442	NT2	01/22/91	0.884	0.00	> 6.39	0.00	> 0.80
8808	27A	438	CER	01/22/91	0.595	0.00	> 43.70	0.00	> 4.74
8808	27A	442	NT2	01/22/91	0.884	0.00	> 6.78	0.00	> 0.22
8809	27A	436	CER	01/22/91	0.528	0.00	> 72.80	0.00	> 5.97
8809	27A	445	NT2	01/22/91	1.042	0.00	> 100.00	0.00	> 3.81
8810	27A	436	CER	01/22/91	0.528	0.00	> 100.00	0.00	> 1.70
8810	27A	445	NT2	01/22/91	1.042	0.00	> 100.00	0.00	> 3.76
8811	27A	439	CER	01/22/91	0.558	0.00	> 0.76	0.00	> 0.16
8811	27A	447	NT2	01/22/91	1.097	0.00	> 1.39	0.00	> 0.19
8812	27A	439	CER	01/22/91	0.558	0.00	> 100.00	0.00	> 3.18
8812	27A	447	NT2	01/22/91	1.097	0.00	> 100.00	0.00	> 12.11
8813	27A	464	CER	02/21/91	0.901	0.00	> 56.00	0.00	> 0.00
8813	27A	440	NT2	01/22/91	0.910	0.00	> 20.00	0.00	> 1.31
8814	27A	464	CER	02/21/91	0.760	0.00	> 100.00	0.00	> 0.18
8814	27A	440	NT2	01/22/91	0.910	0.00	> 88.70	0.00	> 0.01
8815	27A	464	CER	02/21/91	0.760	28.10	> 97.00	3.45	> 13.51
8815	27A	440	NT2	01/22/91	1.020	12.90	> 64.60	5.01	> 31.65
8816	27A	500	NT2	02/21/91	1.272	42.20	> 100.00	2.37	> 15.95
8816	27A	490	CER	02/21/91	0.759	0.00	> 44.00	0.00	> 5.96
8816	27A	440	NT2	01/22/91	1.020	0.00	> 14.60	0.00	> 0.38
8817	27A	436	CER	01/22/91	0.560	0.00	> 120.00	0.00	> 13.80
8817	27A	446	NT2	01/22/91	1.057	0.00	> 73.50	0.00	> 3.92
8818	27A	436	CER	01/22/91	0.560	0.00	> 40.00	0.00	> 11.82
8818	27A	446	NT2	01/22/91	1.057	0.00	> 22.20	0.00	> 1.05
8819	27A	436	CER	01/22/91	0.534	0.00	> 100.00	0.00	> 13.61
8819	27A	446	NT2	01/22/91	1.000	0.00	> 100.00	0.00	> 1.73

## Cumulative Summary (cont'd)

AVL	Ship-	Pit Cell	Test	Diff-					
No.	cont	# Line	Date	mtl.	TC 50	TC 25	\$1	TAI	
6828	27A	43M CEM	01/22/91	0.634	0.00	> 100.00	0.00	11.22	
6829	27A	44X MT2	01/22/91	1.000	0.00	> 100.00	0.00	> 3.99	
6821	27A	43J CEM	01/22/91	0.657	0.00	> 100.00	0.00	> 6.24	
6821	27A	44Y MT2	01/22/91	1.074	0.00	> 100.00	0.00	> 5.00	
6822	27A	43J CEM	01/22/91	0.657	0.00	> 100.00	0.00	> 11.42	
6822	27A	44Y MT2	01/22/91	1.074	0.00	> 100.00	0.00	> 2.67	
6823	27A	43J CEM	01/22/91	0.720	0.00	> 100.00	0.00	> 6.24	
6823	27A	44Z MT2	01/22/91	1.128	0.00	> 100.00	0.00	> 5.50	
6824	27A	43J CEM	01/22/91	0.720	0.00	5.39	0.00	> 1.55	
6824	27A	44Z MT2	01/22/91	1.128	0.00	1.54	0.00	0.00	
6825	27A	43K CEM	01/22/91	0.651	0.00	5.30	0.00	> 2.33	
6825	27A	450 MT2	01/22/91	0.937	0.00	6.41	0.00	> 0.28	
6826	27A	43K CEM	01/22/91	0.651	0.00	51.10	0.00	> 4.57	
6826	27A	450 MT2	01/22/91	0.937	0.00	15.20	0.00	> 1.36	
6827	27A	43L CEM	01/22/91	0.774	0.00	7.19	0.00	> 2.20	
6827	27A	451 MT2	01/22/91	0.933	0.00	7.92	0.00	> 2.13	
6828	27A	43L CEM	01/22/91	0.774	0.00	5.47	0.00	> 0.45	
6828	27A	451 MT2	01/22/91	0.933	0.00	11.00	0.00	> 2.95	
6829	27A	43A CEM	01/22/91	0.587	0.00	15.00	0.00	> 0.20	
6829	27A	452 MT2	01/22/91	1.050	0.00	5.07	0.00	0.00	
6830	27A	43M CEM	01/22/91	0.587	0.00	14.81	0.00	> 2.00	
6830	27A	452 MT2	01/22/91	1.050	0.00	8.79	0.00	0.00	
6831	27A	43M CEM	01/22/91	0.654	0.00	12.60	0.00	> 4.09	
6831	27A	453 MT2	01/22/91	0.923	0.00	15.20	0.00	> 7.61	
6832	27A	43M CEM	01/22/91	0.654	0.00	5.90	0.00	0.00	
6832	27A	453 MT2	01/22/91	0.923	0.00	3.32	0.00	> 1.90	
6833	27A	50 CEM	01/22/91	0.721	0.00	3.10	0.00	0.00	
6833	27A	454 MT2	01/22/91	0.997	0.00	4.90	0.00	> 1.69	
6834	27A	43G CEM	01/22/91	0.721	0.00	1.35	0.00	> 0.63	
6834	27A	454 MT2	01/22/91	0.997	0.00	1.06	0.00	> 0.22	
6835	27A	43P CEM	01/22/91	0.727	0.00	6.60	0.00	> 3.96	
6835	27A	455 MT2	01/22/91	1.031	0.00	6.18	0.00	> 2.10	
6836	27A	43P CEM	01/22/91	0.727	0.00	5.83	0.00	0.00	
6836	27A	455 MT2	01/22/91	1.031	0.00	4.65	0.00	> 0.30	
6837	27A	43Q CEM	01/22/91	0.639	0.00	3.62	0.00	0.00	
6837	27A	456 MT2	01/22/91	1.017	0.00	5.64	0.00	> 1.57	
6838	27A	43Q CEM	01/22/91	0.639	0.00	9.03	0.00	> 3.51	
6838	27A	456 MT2	01/22/91	1.017	0.00	3.82	0.00	0.00	
6839	27A	43R CEM	01/22/91	0.702	0.00	4.16	0.00	0.00	
6839	27A	457 MT2	01/22/91	0.976	0.00	5.38	0.00	> 0.70	
6840	27A	43R CEM	01/22/91	0.702	0.00	> 100.00	0.00	> 1.27	
6840	27A	457 MT2	01/22/91	0.976	0.00	> 100.00	0.00	> 2.34	
6841	27A	43S CEM	01/22/91	0.578	0.00	13.70	0.00	> 0.60	
6841	27A	458 MT2	01/22/91	1.010	0.00	5.41	0.00	> 1.82	
6842	27A	43S CEM	01/22/91	0.578	0.00	8.35	0.00	> 0.10	
6842	27A	458 MT2	01/22/91	1.010	0.00	3.86	0.00	> 1.02	
6843	27A	43T CEM	01/22/91	0.797	0.00	6.20	0.00	0.00	
6843	27A	459 MT2	01/22/91	0.803	0.00	5.94	0.00	> 0.73	
6844	27A	43T CEM	01/22/91	0.797	0.00	43.00	0.00	> 2.20	
6844	27A	459 MT2	01/22/91	0.803	0.00	> 100.00	0.00	> 2.39	
6845	27A	43U CEM	01/22/91	0.459	0.00	51.00	0.00	0.00	
6845	27A	45A MT2	01/22/91	0.908	0.00	14.70	0.00	> 1.37	
6846	27A	43U CEM	01/22/91	0.659	0.00	22.70	0.00	0.00	
6846	27A	45A MT2	01/22/91	0.908	0.00	24.90	0.00	> 1.92	
6847	27A	43V CEM	01/22/91	0.735	0.00	58.80	0.00	> 3.92	
6847	27A	458 MT2	01/22/91	0.875	0.00	> 100.00	0.00	> 6.38	
6848	27A	43Y CEM	01/22/91	0.735	0.00	55.70	0.00	0.00	
6848	27A	458 MT2	01/22/91	0.875	0.00	> 100.00	0.00	> 2.39	
6849	27A	40C CEM	02/21/91	0.759	100.00	> 1.00	0.01	> 3.24	
6849	27A	45C MT2	01/22/91	0.924	73.50	> 100.00	1.36	> 15.76	
6849	27A	401 MT2	02/21/91	1.363	0.00	173.00	0.00	> 8.12	
6850	27A	400 CEM	02/21/91	0.673	0.00	5.71	0.00	> 2.47	
6850	27A	45C MT2	01/22/91	0.924	0.00	6.27	0.00	> 1.03	
6851	27A	400 CEM	02/21/91	0.673	0.00	4.27	0.00	0.00	
6851	27A	450 MT2	01/22/91	1.016	0.00	3.96	0.00	> 1.80	
6852	27A	406 CEM	02/21/91	0.854	0.00	4.69	0.00	0.00	
6852	27A	450 MT2	01/22/91	1.016	0.00	2.65	0.00	> 1.47	
6853	27A	43T CEM	01/22/91	0.745	0.00	57.10	0.00	> 0.50	
6853	27A	45E MT2	01/22/91	1.104	0.00	> 100.00	0.00	> 6.40	
6854	27A	43Y CEM	01/22/91	0.745	0.00	44.40	0.00	0.00	
6854	27A	45E MT2	01/22/91	1.104	0.00	> 100.00	0.00	> 3.33	
6855	27A	450 CEM	01/23/91	1.121	49.10	77.30	1.12	> 4.39	
6855	27A	32X MT2	01/23/91	1.325	0.00	0.17	0.00	> 0.44	
6856	27A	450 CEM	01/23/91	1.121	0.00	49.80	0.00	> 2.81	
6854	27A	32X MT2	01/23/91	1.325	0.00	20.30	0.00	0.00	
6857	27A	45P CEM	01/23/91	1.049	0.00	19.90	0.00	0.46	
6857	27A	32Y MT2	01/23/91	1.343	0.00	20.00	0.00	0.00	
6858	27A	45P CEM	01/23/91	1.049	0.00	14.60	0.00	> 1.64	

## Cumulative Summary (cont'd)

Ave.	Ship-	PIC	Cell	Test	Date	Diff-	IC 50	TC 25	SI	TAI
No.	ment	3	Line			mmil.				
8858	27A	32Y	NT2	01/23/91	1.343	0.00	4.77	0.00	0.00	
8859	27A	434	CEN	01/23/91	1.067	0.00	64.70	0.00	0.32	
8859	27A	32Z	NT2	01/23/91	1.339	0.00	61.50	0.00	0.00	
8860	27A	458	CEN	01/23/91	1.067	0.00	4.97	0.00	0.00	
8860	27A	32Z	NT2	01/23/91	1.339	0.00	0.91	0.00	0.00	
8861	27A	434	CEN	01/23/91	0.780	0.00	4.70	0.00	0.00	
8861	27A	400	NT2	01/23/91	1.317	0.00	2.10	0.00	> 0.10	
8862	27A	458	CEN	01/23/91	0.780	0.00	> 100.00	0.00	4.01	
8862	27A	400	NT2	01/23/91	1.317	0.00	> 100.00	0.00	> 0.33	
8863	27A	458	CEN	01/23/91	0.976	0.00	> 100.00	0.00	0.11	
8863	27A	411	NT2	01/23/91	1.233	0.00	> 100.00	0.00	0.00	
8864	27A	458	CEN	01/23/91	0.976	0.00	21.80	0.00	0.00	
8864	27A	401	NT2	01/23/91	1.233	0.00	14.20	0.00	0.00	
8865	27A	457	CEN	01/23/91	0.750	0.00	> 100.00	0.00	4.14	
8865	27A	402	NT2	01/23/91	1.311	0.00	90.90	0.00	0.00	
8866	27A	457	CEN	01/23/91	0.750	0.00	18.90	0.00	0.00	
8866	27A	402	NT2	01/23/91	1.311	0.00	1.37	0.00	0.00	
8867	27A	450	CEN	01/23/91	1.152	0.00	0.14	0.00	0.00	
8867	27A	403	NT2	01/23/91	1.298	0.00	22.60	0.00	0.00	
8868	27A	450	CEN	01/23/91	1.152	0.00	41.80	0.00	0.00	
8868	27A	403	NT2	01/23/91	1.298	0.00	10.40	0.00	0.00	
8869	27A	459	CEN	01/23/91	1.103	0.00	16.10	0.00	0.00	
8869	27A	404	NT2	01/23/91	1.343	0.00	9.20	0.00	0.00	
8870	27A	45V	CEN	01/23/91	1.103	0.00	50.90	0.00	0.00	
8870	27A	404	NT2	01/23/91	1.343	0.00	16.00	0.00	0.00	
8871	27A	450	CEN	01/23/91	1.232	0.00	2.56	0.00	0.00	
8871	27A	405	NT2	01/23/91	1.368	0.00	4.16	0.00	0.23	
8872	27A	45W	CEN	01/23/91	1.232	0.00	15.00	0.00	1.97	
8872	27A	405	NT2	01/23/91	1.348	0.00	4.07	0.00	0.00	
8873	27A	45X	CEN	01/23/91	1.276	0.00	59.80	0.00	0.32	
8873	27A	406	NT2	01/23/91	1.397	0.00	35.40	0.00	0.00	
8874	27A	45X	CEN	01/23/91	1.276	0.00	6.24	0.00	0.03	
8874	27A	406	NT2	01/23/91	1.397	0.00	4.90	0.00	0.00	
8875	27A	457	CEN	01/23/91	1.109	0.00	44.50	0.00	0.00	
8875	27A	407	NT2	01/23/91	1.363	0.00	20.60	0.00	0.00	
8876	27A	45Y	CEN	01/23/91	1.109	0.00	3.70	0.00	0.00	
8876	27A	407	NT2	01/23/91	1.343	0.00	1.37	0.00	0.00	
8877	27A	452	CEN	01/23/91	0.904	0.00	6.44	0.00	> 0.68	
8877	27A	408	NT2	01/23/91	1.301	0.00	6.89	0.00	> 0.00	
8878	27A	452	CEN	01/23/91	0.904	0.00	8.87	0.00	> 3.00	
8878	27A	408	NT2	01/23/91	1.301	0.00	> 100.00	0.00	0.00	
8879	27A	460	CEN	01/23/91	0.960	0.00	> 100.00	0.00	2.30	
8879	27A	409	NT2	01/23/91	1.282	0.00	73.80	0.00	0.00	
8880	27A	460	CEN	01/23/91	0.960	0.00	49.70	0.00	3.46	
8880	27A	409	NT2	01/23/91	1.282	0.00	12.40	0.00	0.00	
8881	27A	461	CEN	01/23/91	0.774	0.00	15.30	0.00	0.00	
8881	27A	404	NT2	01/23/91	1.277	0.00	5.29	0.00	0.00	
8882	27A	461	CEN	01/23/91	0.774	0.00	15.30	0.00	> 0.50	
8882	27A	404	NT2	01/23/91	1.277	0.00	2.54	0.00	0.00	
8883	27A	462	CEN	01/23/91	1.035	0.00	35.00	0.00	0.29	
8883	27A	405	NT2	01/23/91	1.270	0.00	45.20	0.00	0.00	
8884	27A	462	CEN	01/23/91	1.035	0.00	21.20	0.00	4.02	
8884	27A	406	NT2	01/23/91	1.270	0.00	48.60	0.00	0.00	
8885	27A	463	CEN	01/23/91	0.892	0.00	22.70	0.00	3.92	
8885	27A	40C	NT2	01/23/91	1.188	0.00	15.90	0.00	> 1.16	
8886	27A	463	CEN	01/23/91	0.892	0.00	47.60	0.00	6.84	
8886	27A	40C	NT2	01/23/91	1.188	0.00	14.30	0.00	0.76	
8887	27A	464	CEN	01/23/91	0.852	0.00	21.60	0.00	0.00	
8887	27A	40B	NT2	01/23/91	1.076	0.32	5.67	> 17.00	> 52.49	
8887	27A	401	NT2	02/21/91	1.343	0.00	3.22	0.00	0.00	
8888	27A	464	CEN	01/23/91	0.852	0.00	7.18	0.00	0.00	
8888	27A	40B	NT2	01/23/91	1.094	0.00	4.80	0.00	0.00	
8889	27A	41T	CEN	01/23/91	0.913	0.00	0.31	0.00	1.15	
8889	27A	40E	NT2	01/23/91	1.234	0.00	3.82	0.00	0.00	
8890	27A	41T	CEN	01/23/91	0.913	0.00	14.50	0.00	1.04	
8890	27A	40E	NT2	01/23/91	1.234	0.00	9.76	0.00	> 0.44	
8891	27A	41U	CEN	01/23/91	0.905	0.00	12.60	0.00	0.00	
8891	27A	40F	NT2	01/23/91	1.204	0.00	10.60	0.00	0.26	
8892	27A	41U	CEN	01/23/91	0.905	0.00	> 100.00	0.00	> 10.12	
8892	27A	40F	NT2	01/23/91	1.204	0.00	57.10	0.00	0.00	
8893	27A	41V	CEN	01/23/91	0.973	0.00	2.82	0.00	0.16	
8893	27A	408	NT2	01/23/91	1.204	0.00	1.71	0.00	0.00	
8894	27A	41V	CEN	01/23/91	0.973	0.00	1.46	0.00	> 2.19	
8894	27A	408	NT2	01/23/91	1.204	0.00	1.30	0.00	0.00	
8895	27A	41V	CEN	01/23/91	1.045	0.00	2.53	0.00	0.00	
8895	27A	40M	NT2	01/23/91	1.204	0.00	13.70	0.00	0.00	
8896	27A	41W	CEN	01/23/91	1.065	0.00	4.01	0.00	> 0.20	
8896	27A	40M	NT2	01/23/91	1.204	0.00	4.04	0.00	0.02	

## Cumulative Summary (cont'd)

AVS	Ship- No.	Pit Cell # Line	Test Date	Diff- mml.	TC 50	TC 25	SI	TAI
8997	27A	61X DEM	01/23/91	1.043	0.00	8.96	0.00	0.00
8997	27A	401 RT2	01/23/91	1.191	0.00	19.20	0.00	0.21
8999	27A	61X CEM	01/23/91	1.043	0.00	45.26	0.00 >	7.77
8999	27A	401 RT2	01/23/91	1.191	0.00	10.00	0.00	0.00
8999	27A	41Y CEM	01/23/91	0.846	0.00 >	100.00	0.00	0.26
8999	27A	400 RT2	01/23/91	0.960	0.00	72.40	0.00	0.00
8900	27A	417 CEM	01/23/91	0.846	0.00	13.30	0.00	0.41
8900	27A	400 RT2	01/23/91	0.960	0.00	2.06	0.00	0.16
8901	27A	412 CEM	01/23/91	0.625	0.00	1.53	0.00 >	0.61
8901	27A	40K RT2	01/23/91	1.153	0.00	0.89	0.00	0.00
8902	27A	41Z CEM	01/23/91	0.625	0.00 >	100.00	0.30	7.62
8902	27A	40K RT2	01/23/91	1.153	0.00	62.60	0.00 >	0.01
8903	27A	420 CEM	01/23/91	0.754	0.00 >	100.00	0.00 >	7.40
8903	27A	40L RT2	01/23/91	1.085	0.00 >	100.00	0.00	0.00
8904	27A	420 CEM	01/23/91	0.754	0.00 >	100.00	0.00 >	15.22
8904	27A	40L RT2	01/23/91	1.085	0.00 >	65.00	0.00	0.00
8905	27A	421 CEM	01/23/91	0.837	0.00 >	100.00	0.00	1.60
8905	27A	40N RT2	01/23/91	0.976	0.00	59.80	0.00 >	0.03
8906	27A	421 CEM	01/23/91	0.837	0.00 >	100.00	0.00 >	7.41
8906	27A	40M RT2	01/23/91	0.976	0.00 >	100.00	0.00	0.40
8907	27A	422 CEM	01/23/91	1.047	0.00 >	100.00	0.00	1.06
8907	27A	40N RT2	01/23/91	1.062	0.00	32.00	0.00	0.11
8908	27A	422 CEM	01/23/91	1.047	0.00 >	100.00	0.00 >	2.43
8908	27A	40N RT2	01/23/91	1.062	0.00	43.80	0.00	0.57
8909	27A	423 CEM	01/23/91	1.001	0.00 >	100.00	0.00 >	9.90
8909	27A	400 RT2	01/23/91	1.087	0.00 >	100.00	0.00	0.05
8910	27A	423 CEM	01/23/91	1.001	0.00 >	100.00	0.00 >	9.61
8910	27A	400 RT2	01/23/91	1.087	0.00 >	80.30	0.00	0.00
8911	27A	424 CEM	01/23/91	1.042	0.00	54.70	0.00	0.00
8911	27A	40P RT2	01/23/91	1.053	0.00 >	100.00	0.00	0.30
8912	27A	424 CEM	01/23/91	1.042	0.00	7.33	0.00 >	1.73
8913	27A	425 CEM	01/23/91	0.753	0.00 >	100.00	0.00	5.41
8913	27A	408 RT2	01/23/91	1.119	0.00 >	100.00	0.00	0.17
8914	27A	425 CEM	01/23/91	0.753	0.00 >	100.00	0.00	6.21
8914	27A	408 RT2	01/23/91	1.119	0.00 >	100.00	0.00	0.78
8915	27A	426 CEM	01/23/91	0.741	0.00 >	100.00	0.00 >	9.61
8915	27A	40R RT2	01/23/91	1.103	0.00 >	100.00	0.00	1.64
8916	27A	426 CEM	01/23/91	0.741	0.00 >	100.00	0.00	12.23
8916	27A	40R RT2	01/23/91	1.103	0.00 >	100.00	0.00	0.12
8917	27A	427 CEM	01/23/91	0.864	0.00 >	100.00	0.00	0.28
8917	27A	409 RT2	01/23/91	1.112	0.00 >	100.00	0.00	0.91
8918	27A	427 CEM	01/23/91	0.864	0.00 >	100.00	0.00 >	1.79
8918	27A	408 RT2	01/23/91	1.112	0.00	19.30	0.00	0.00
8919	27A	428 CEM	01/23/91	0.963	0.00	1.55	0.00 >	0.04
8919	27A	40T RT2	01/23/91	1.014	0.00	0.59	0.00	0.00
8920	27A	428 CEM	01/23/91	0.963	0.00	26.70	0.00 >	5.49
8920	27A	40T RT2	01/23/91	1.014	0.00	5.47	0.00	0.00
8921	27A	429 CEM	01/23/91	0.992	0.00	1.69	0.00 >	0.20
8922	27A	429 CEM	01/23/91	0.992	0.00 >	100.00	0.00 >	6.70
8923	27A	42A CEM	01/23/91	1.051	0.00 >	100.00	0.00 >	4.28
8923	27A	40V RT2	01/23/91	0.908	0.00 >	100.00	0.00 >	2.40
8924	27A	42A CEM	01/23/91	1.051	0.00 >	100.00	0.00 >	8.51
8924	27A	40V RT2	01/23/91	0.908	0.00 >	100.00	0.00	1.58
8925	27A	428 CEM	01/23/91	0.735	0.00 >	100.00	0.00	0.00
8925	27A	40V RT2	01/23/91	0.845	0.00 >	100.00	0.00 >	1.70
8926	27A	428 CEM	01/23/91	0.735	0.00 >	100.00	0.00	0.00
8926	27A	40V RT2	01/23/91	0.845	0.00 >	100.00	0.00 >	1.61
8927	27A	42C CEM	01/23/91	0.811	0.00 >	100.00	0.00	3.61
8927	27A	40E RT2	01/23/91	0.964	0.00	77.90	0.00	0.10
8928	27A	42C CEM	01/23/91	0.811	0.00 >	100.00	0.00 >	16.92
8928	27A	40E RT2	01/23/91	0.964	0.00 >	100.00	0.00 >	0.10
8929	27A	42B CEM	01/23/91	0.838	0.00 >	100.00	0.00	3.42
8929	27A	40T RT2	01/23/91	0.543	0.00 >	100.00	0.00 >	3.98
8930	27A	42B CEM	01/23/91	0.838	0.00 >	100.00	0.30	5.43
8930	27A	40T RT2	01/23/91	0.543	0.00 >	100.00	0.00 >	2.70
8931	27A	42B CEM	01/23/91	0.944	0.00 >	100.00	0.00	1.98
8931	27A	402 RT2	01/23/91	0.553	0.00 >	100.00	0.00 >	6.10
8932	27A	42B CEM	01/23/91	0.744	0.00	25.70	0.00	1.34
8932	27A	402 RT2	01/23/91	0.553	0.00	17.10	0.00	2.52
8933	27A	42F CEM	01/23/91	1.048	0.00 >	100.00	0.00 >	5.03
8933	27A	410 RT2	01/23/91	0.545	0.00 >	100.00	0.00 >	3.00
8934	27A	42F CEM	01/23/91	1.048	0.00	52.50	0.00	4.13
8934	27A	410 RT2	01/23/91	0.545	0.00	9.74	0.00	0.74
8935	27A	426 CEM	01/23/91	0.991	0.00	0.31	0.00	0.26
8935	27A	411 RT2	01/23/91	0.512	0.00	53.70	0.00 >	5.76
8936	27A	426 CEM	01/23/91	0.991	0.00 >	100.00	0.00 >	7.60
8936	27A	411 RT2	01/23/91	0.512	0.00 >	100.00	0.00 >	7.01
8937	27A	426 CEM	01/23/91	0.907	0.00 >	100.00	0.00	1.74

## Cumulative Summary (cont'd)

Avg	Ship-	Plt	Cell	Test	Diff-		IC 50	TC 25	SI	TAI
No.	ment	#	Line	Date	mtl.					
8957	27A	612	MT2	01/23/91	0.704		0.00 > 100.00	0.00 >	3.52	
8958	27A	621	CEM	01/23/91	0.907		0.00 > 100.00	0.00		6.61
8958	27A	612	MT2	01/23/91	0.704		0.00 > 100.00	0.00 >	1.55	
8959	27A	646	CEM	01/24/91	0.596		0.00 > 100.00	0.00 >	19.96	
8959	27A	646	MT2	01/24/91	1.461		0.00 > 100.00	0.00		0.00
8960	27A	646	CEM	01/24/91	0.596		0.00 > 100.00	0.00 >	30.78	
8960	27A	646	MT2	01/24/91	1.461		0.00 > 100.00	0.00		0.00
8961	27A	34F	CEM	01/24/91	0.978		0.00 > 100.00	0.00 >	5.60	
8961	27A	647	MT2	01/24/91	1.484		0.00 > 100.00	0.00 >	0.01	
8962	27A	34F	CEM	01/24/91	0.973		0.00	8.87	0.00	2.26
8962	27A	647	MT2	01/24/91	1.484		0.00	3.48	0.00	0.00
8963	27A	34G	CEM	01/24/91	1.306		0.00	2.34	0.00	0.49
8963	27A	648	MT2	01/24/91	1.312		0.00	1.64	0.00 >	0.61
8964	27A	34G	CEM	01/24/91	1.306		0.00	1.38	0.00	0.00
8964	27A	648	MT2	01/24/91	1.312		0.00	1.63	0.00 >	0.61
8965	27A	34H	CEM	01/24/91	1.049		0.00	3.74	0.00	0.00
8965	27A	649	MT2	01/24/91	1.501		0.00	4.08	0.00 >	0.43
8966	27A	34H	CEM	01/24/91	1.049		0.00	1.55	0.00	0.00
8966	27A	649	MT2	01/24/91	1.501		0.00	1.55	0.00 >	0.20
8967	27A	34I	CEM	01/24/91	0.970		0.00	3.58	0.00	0.00
8967	27A	64A	MT2	01/24/91	1.378		0.00	4.61	0.00	0.00
8968	27A	34I	CEM	01/24/91	0.970		0.00	6.60	0.00	0.00
8968	27A	64A	MT2	01/24/91	1.376		0.00	4.20	0.00 >	0.03
8969	27A	34J	CEM	01/24/91	1.117		0.00	55.20	0.00 >	4.30
8969	27A	64B	MT2	01/24/91	1.375		0.00	100.00	0.00	1.29
8970	27A	34J	CEM	01/24/91	1.117		0.00	70.90	0.00 >	7.63
8970	27A	64B	MT2	01/24/91	1.375		0.00 >	100.00	0.00	0.27
8971	27A	34K	CEM	01/24/91	1.295		0.00	16.80	0.00	0.61
8971	27A	64C	MT2	01/24/91	1.255		0.00	12.90	0.00 >	0.63
8972	27A	34K	CEM	01/24/91	1.295		0.00	1.29	0.00	0.00
8972	27A	64C	MT2	01/24/91	1.255		0.00	1.64	0.00 >	0.62
8973	27A	34L	CEM	01/24/91	0.926		0.00	4.90	0.00 >	4.41
8973	27A	64D	MT2	01/24/91	1.433		0.00	1.61	0.00	0.00
8974	27A	34L	CEM	01/24/91	0.926		0.00	15.00	0.00	1.58
8974	27A	64D	MT2	01/24/91	1.433		0.00	4.76	0.00 >	0.10
8975	27A	34M	CEM	01/24/91	1.131		0.00	1.24	0.00	0.00
8975	27A	64E	MT2	01/24/91	1.345		0.00	4.08	0.00	0.00
8976	27A	34M	CEM	01/24/91	1.131		0.00	4.00	0.00 >	0.06
8976	27A	64E	MT2	01/24/91	1.345		0.00	3.63	0.00 >	0.01
8977	27A	34N	CEM	01/24/91	1.050		0.00	4.07	0.00	0.00
8977	27A	64F	MT2	01/24/91	1.296		0.00	1.58	0.00	0.00
8978	27A	34N	CEM	01/24/91	1.050		0.00	0.74	0.00	0.00
8978	27A	64G	CEM	02/22/91	0.467		0.00	0.00	0.00	0.00
8978	27A	64F	MT2	01/24/91	1.296		0.00	0.52	0.00	0.00
8979	27A	34O	MT2	02/22/91	1.316		0.00	0.13	0.00	0.00
8979	27A	34O	CEM	01/24/91	1.104		0.00	11.20	0.00 >	2.80
8979	27A	64G	MT2	01/24/91	1.399		0.00	5.04	0.00 >	0.98
8980	27A	34O	CEM	01/24/91	1.104		0.00	4.70	0.00 >	2.50
8980	27A	64H	MT2	01/24/91	1.399		0.00	1.74	0.00 >	0.70
8981	27A	34P	CEM	01/24/91	0.912		0.00	3.04	0.00	0.00
8981	27A	64I	MT2	01/24/91	1.059		0.00	2.10	0.00	0.01
8982	27A	34P	CEM	01/24/91	0.912		0.00 >	100.00	0.00	0.85
8982	27A	64J	MT2	01/24/91	1.059		0.00 >	100.00	0.00	0.00
8983	27A	34P	CEM	01/24/91	0.900		0.00	68.80	0.00	10.01
8983	27A	64J	MT2	01/24/91	1.321		0.00 >	100.00	0.00	0.00
8984	27A	34P	CEM	01/24/91	0.900		0.00 >	100.00	0.00	2.83
8984	27A	64J	MT2	01/24/91	1.321		0.00	45.80	0.00	0.00
8985	27A	34R	CEM	01/24/91	0.841		0.00	63.10	0.00	0.22
8985	27A	64L	MT2	01/24/91	1.370		0.00	60.00	0.00	0.00
8986	27A	34R	CEM	01/24/91	0.841		0.00 >	100.00	0.00	0.85
8986	27A	64L	MT2	01/24/91	1.370		0.00 >	100.00	0.00	0.00
8987	27A	34S	CEM	01/24/91	1.225		0.00	16.30	0.00 >	3.68
8987	27A	65K	MT2	01/24/91	1.192		0.00 >	100.00	0.00	0.03
8988	27A	34S	CEM	01/24/91	1.225		0.00	69.40	0.00 >	4.02
8988	27A	65K	MT2	01/24/91	1.192		0.00 >	100.00	0.00	0.20
8989	27A	34T	CEM	01/24/91	1.097		0.00	75.80	0.00	1.39
8989	27A	65L	MT2	01/24/91	1.251		0.00 >	100.00	0.00	0.00
8990	27A	34T	CEM	01/24/91	1.097		0.00	28.70	0.00	3.82
8990	27A	65L	MT2	01/24/91	1.251		0.00 >	100.00	0.00 >	0.10
8991	27A	34U	CEM	01/24/91	1.109		0.00	86.40	0.00	0.00
8991	27A	65M	MT2	01/24/91	1.280		0.00 >	100.00	0.00 >	1.33
8992	27A	34U	CEM	01/24/91	1.109		0.00	64.40	0.00	0.00
8992	27A	65M	MT2	01/24/91	1.280		0.00	76.70	0.00	0.34
8993	27A	34V	CEM	01/24/91	1.010		0.00 >	100.00	0.00	0.81
8993	27A	65N	MT2	01/24/91	1.0		0.00 >	100.00	0.00	1.55
8994	27A	34W	CEM	01/24/91	1.0		0.00	12.80	0.00	0.96
8994	27A	65N	MT2	01/24/91	1.097		0.00	9.38	0.00 >	1.99
8995	27A	34W	CEM	01/24/91	1.003		0.00	34.40	0.00	0.49

## CUMULATIVE SUMMARY (cont'd)

AVG No.	SHIP:	PIC	Cell	Test	Diffr.	Date	mill.	TC 50	TC 25	\$1	%AF
8975	27A	460	HT2	01/24/91	1.299	0.00	> 100.00	0.00	0.21		
8976	27A	34U	CER	01/24/91	1.003	0.00	29.00	0.00	2.71		
8976	27A	460	HT2	01/24/91	1.299	0.00	94.10	0.00	0.20		
8977	27A	34U	CER	01/24/91	1.057	0.00	5.01	0.00	0.06		
8977	27A	460	HT2	01/24/91	1.342	0.00	12.80	0.00	0.15		
8978	27A	34U	CER	01/24/91	1.057	0.00	1.48	0.00	0.32		
8978	27A	460	HT2	01/24/91	1.342	0.00	1.06	0.00	0.00		
8979	27A	34V	CER	01/24/91	1.158	0.00	4.34	0.00	0.50		
8979	27A	460	HT2	01/24/91	1.011	0.00	4.52	0.00	0.00		
8980	27A	34V	CER	01/24/91	1.158	0.00	35.70	0.00	11.21		
8980	27A	460	HT2	01/24/91	1.011	0.00	0.72	0.00	0.00		
8981	27A	34Q	CER	01/24/91	1.416	0.00	29.40	0.00	0.00		
8981	27A	460	HT2	01/24/91	1.288	0.00	16.70	0.00	0.00		
8982	27A	34Q	CER	01/24/91	1.416	0.00	18.30	0.00	0.16		
8982	27A	460	HT2	01/24/91	1.288	0.00	> 100.00	0.00	0.15		
8983	27A	34Q	CER	01/24/91	1.231	0.00	54.40	0.00	0.00		
8983	27A	465	HT2	01/24/91	1.308	0.00	32.00	0.00	0.86		
8984	27A	34Q	CER	01/24/91	1.231	0.00	26.80	0.00	1.33		
8984	27A	465	HT2	01/24/91	1.308	0.00	12.70	0.00	0.00		
8985	27A	34X	CER	01/24/91	0.827	0.00	> 100.00	0.00	2.80		
8985	27A	46T	HT2	01/24/91	1.169	0.00	54.00	0.00	1.00		
8986	27A	34T	CER	01/24/91	0.827	0.00	94.80	0.00	7.02		
8986	27A	461	HT2	01/24/91	1.169	0.00	73.50	0.00	0.11		
8987	27A	34Z	CER	01/24/91	1.067	0.00	20.00	0.00	4.64		
8987	27A	464	HT2	01/24/91	1.299	0.00	15.10	0.00	0.12		
8988	27A	34Z	CER	01/24/91	1.067	0.00	16.00	0.00	5.14		
8988	27A	464	HT2	01/24/91	1.299	0.00	5.22	0.00	0.05		
8989	27A	34X	CER	01/24/91	1.249	0.00	36.10	0.00	0.70		
8989	27A	34Y	HT2	01/24/91	1.336	0.00	22.50	0.00	0.30		
8990	27A	34X	CER	01/24/91	1.249	0.00	6.92	0.00	0.41		
8990	27A	34Y	HT2	01/24/91	1.336	0.00	1.69	0.00	0.00		
8991	27A	34X	CER	01/24/91	1.032	0.00	0.32	0.00	0.00		
8991	27A	34Y	HT2	01/24/91	1.110	0.00	2.90	0.00	0.30		
8992	27A	34X	CER	01/24/91	1.032	0.00	96.00	0.00	0.00		
8992	27A	34Y	HT2	01/24/91	1.110	0.00	> 100.00	0.00	0.00		
8993	27A	34X	CER	01/24/91	0.855	0.00	> 100.00	0.00	13.33		
8993	27A	34Y	HT2	01/24/91	1.232	0.00	> 100.00	0.00	0.00		
8994	27A	34X	CER	01/24/91	0.855	0.00	15.50	0.00	3.29		
8994	27A	34Y	HT2	01/24/91	1.232	0.00	4.99	0.00	0.00		
8995	27A	34X	CER	01/24/91	0.962	0.00	> 100.00	0.00	2.30		
8995	27A	34Y	HT2	01/24/91	1.267	0.00	50.50	0.00	0.20		
8996	27A	34X	CER	01/24/91	0.962	0.00	1.98	0.00	0.38		
8996	27A	34Y	HT2	01/24/91	1.267	0.00	2.77	0.00	0.24		
8997	27A	34X	CER	01/24/91	1.055	0.00	5.82	0.00	0.00		
8997	27A	34Y	HT2	01/24/91	1.123	0.00	1.22	0.00	0.00		
8998	27A	34X	CER	01/24/91	1.055	0.00	5.84	0.00	1.35		
8998	27A	34Y	HT2	01/24/91	1.128	0.00	1.41	0.00	0.00		
8999	27A	34X	CER	01/24/91	0.991	0.00	> 100.00	0.00	4.00		
8999	27A	34Y	HT2	01/24/91	1.040	0.00	> 100.00	0.00	0.00		
9000	27A	34X	CER	01/24/91	0.991	0.00	4.53	0.00	0.69		
9000	27A	34Y	HT2	01/24/91	1.060	0.00	1.40	0.00	0.00		
9001	27A	34X	CER	01/24/91	1.019	0.00	35.20	0.00	1.45		
9001	27A	34Y	HT2	01/24/91	1.309	0.00	52.20	0.00	0.20		
9002	27A	34X	CER	01/24/91	1.019	0.00	6.37	0.00	0.32		
9002	27A	34Y	HT2	01/24/91	1.309	0.00	0.62	0.00	0.00		
9003	27A	34X	CER	01/24/91	0.860	0.00	> 100.00	0.00	7.81		
9003	27A	34Y	HT2	01/24/91	0.983	0.00	> 100.00	0.00	1.80		
9004	27A	34X	CER	01/24/91	0.960	0.00	> 100.00	0.00	6.21		
9004	27A	34Y	HT2	01/24/91	0.983	0.00	> 100.00	0.00	1.22		
9005	27A	34X	CER	01/24/91	1.009	0.00	> 100.00	0.00	4.70		
9005	27A	34Y	HT2	01/24/91	1.248	0.00	> 100.00	0.00	0.44		
9006	27A	34X	CER	01/24/91	1.009	0.00	52.40	0.00	9.23		
9006	27A	34Y	HT2	01/24/91	1.248	0.00	2.03	0.00	0.00		
9007	27A	34C	CER	01/24/91	1.193	0.00	> 100.00	0.00	8.43		
9007	27A	34X	HT2	01/24/91	1.335	0.00	> 100.00	0.00	0.03		
9008	27A	34C	CER	01/24/91	1.193	0.00	> 100.00	0.00	3.48		
9008	27A	34X	HT2	01/24/91	1.335	0.00	> 100.00	0.00	0.00		
9009	27A	34D	CER	01/24/91	0.875	0.00	10.70	0.00	8.12		
9009	27A	34Y	HT2	01/24/91	1.171	0.00	4.12	0.00	0.01		
9010	27A	34D	CER	01/24/91	0.875	0.00	> 100.00	0.00	7.32		
9010	27A	34Y	HT2	01/24/91	1.171	0.00	> 100.00	0.00	2.05		
9011	27A	34E	CER	01/24/91	0.790	0.04	27.70	33.01	10.84		
9011	27A	34Y	HT2	01/24/91	1.003	0.00	> 100.00	0.00	1.00		
9012	27A	34E	CER	01/24/91	0.790	0.00	> 100.00	0.00	0.00		
9012	27A	34Y	HT2	01/24/91	1.003	0.00	> 100.00	0.00	1.73		
9013	27A	34F	CER	01/24/91	0.605	0.00	100.00	0.00	0.00		
9013	27A	34W	HT2	01/24/91	1.164	0.00	69.40	0.00	0.02		
9014	27A	34F	CER	01/24/91	0.605	0.00	74.50	0.00	0.00		

## Cumulative Summary (cont'd)

AVS	Ship-	Pit	Cell	Test	Dif-	TG 50	TG 25	SI	TAI
No.	no.	#	Line	Date	mtl.				
9014	27A	34D	MT2	01/24/91	1.164	0.00	49.90	0.00	0.04
9015	27A	34G	CEN	01/24/91	0.874	0.00	> 100.00	0.00	3.41
9015	27A	34J	MT2	01/24/91	1.043	0.00	> 100.00	0.00	0.54
9016	27A	34G	CEN	01/24/91	0.874	< 0.32	> 100.00	> 312.50	> 5.48
9016	27A	40E	CEN	02/21/91	0.854	0.00	0.00	0.00	0.00
9016	27A	34J	MT2	01/24/91	1.048	0.00	> 100.00	0.00	0.24
9017	27A	34H	CEN	01/24/91	0.907	0.00	> 100.00	0.00	4.14
9017	27A	34Q	MT2	01/24/91	1.123	0.00	0.32	0.00	0.30
9018	27A	34W	CEN	01/24/91	0.907	0.00	19.60	0.00	1.60
9018	27A	34Q	MT2	01/24/91	1.123	0.00	> 100.00	0.00	0.00
9019	27A	34L	CEN	01/24/91	0.824	0.00	> 100.00	0.00	16.51
9019	27A	34G	MT2	01/24/91	1.255	0.00	> 100.00	0.00	0.14
9020	27A	34L	CEN	01/24/91	0.824	0.00	> 100.00	0.00	19.81
9020	27A	34S	MT2	01/24/91	1.255	0.00	> 100.00	0.00	0.97
9021	27A	34J	CEN	01/24/91	1.001	0.00	> 100.00	0.00	0.27
9021	27A	34A	MT2	01/24/91	1.063	0.00	> 100.00	0.00	0.20
9022	27A	34J	CEN	01/24/91	1.001	0.00	96.60	0.00	12.13
9022	27A	34G	MT2	01/24/91	1.063	0.00	22.10	0.00	0.00
9023	27A	34K	CEN	01/24/91	0.928	0.00	> 100.00	0.00	2.43
9023	27A	34S	MT2	01/24/91	1.061	0.00	2.83	0.00	0.00
9024	27A	34K	CEN	01/24/91	0.928	4.93	12.10	2.46	12.86
9024	27A	40F	CEN	02/21/91	0.854	0.00	16.90	0.00	3.83
9024	27A	34S	MT2	01/24/91	1.061	0.00	5.78	0.00	1.04
9025	27A	34L	CEN	01/24/91	0.866	0.00	> 100.00	0.00	6.19
9025	27A	34G	MT2	01/24/91	1.174	0.00	> 100.00	0.00	1.40
9026	27A	34L	CEN	01/24/91	0.866	0.77	4.90	6.39	> 15.03
9026	27A	34G	MT2	01/24/91	1.174	0.00	1.48	0.00	0.00
9027	27A	34H	CEN	01/24/91	0.939	0.00	> 100.00	0.00	4.94
9027	27A	34T	MT2	01/24/91	1.110	0.00	24.10	0.00	0.00
9028	27A	34H	CEN	01/24/91	0.939	27.80	58.70	2.11	> 14.81
9028	27A	34T	MT2	01/24/91	1.110	0.00	20.60	0.00	0.36
9029	27A	34W	CEN	01/24/91	1.080	0.00	17.60	0.00	4.29
9029	27A	34B	MT2	01/24/91	1.156	0.00	4.04	0.00	0.00
9030	27A	34W	CEN	01/24/91	1.080	0.00	12.80	0.00	8.18
9030	27A	34B	MT2	01/24/91	1.156	0.00	13.00	0.00	1.52
9031	27A	34O	CEN	01/24/91	1.064	0.00	7.37	0.00	1.39
9031	27A	34P	MT2	01/24/91	0.994	0.00	5.44	0.00	0.72
9032	27A	34O	CEN	01/24/91	1.064	0.00	3.63	0.00	0.24
9032	27A	34P	MT2	01/24/91	0.994	0.00	1.44	0.00	0.01
9033	27A	34P	CEN	01/24/91	0.892	0.00	9.27	0.00	1.20
9033	27A	34A	MT2	01/24/91	0.871	0.00	5.15	0.00	0.00
9034	27A	34P	CEN	01/24/91	0.892	0.00	15.50	0.00	3.61
9034	27A	34A	MT2	01/24/91	0.871	0.00	2.61	0.00	0.15
9035	27A	40F	CEN	02/21/91	0.854	0.00	14.40	0.00	8.62
9035	27A	34B	MT2	01/24/91	1.051	0.00	7.17	0.00	3.30
9036	27A	34Q	CEN	01/24/91	0.815	0.00	> 100.00	0.00	2.00
9036	27A	34B	MT2	01/24/91	1.051	0.00	37.20	0.00	0.00
9037	27A	34H	CEN	01/24/91	1.014	0.00	4.76	0.00	1.32
9037	27A	34C	MT2	01/24/91	1.224	0.00	23.30	0.00	1.81
9038	27A	34C	CEN	01/24/91	1.014	0.00	42.00	0.00	2.56
9038	27A	34C	MT2	01/24/91	1.224	0.00	23.80	0.00	0.63
9039	27A	34Y	CEN	01/25/91	1.128	0.00	6.44	0.00	0.99
9039	27A	34T	MT2	01/25/91	1.143	0.00	1.47	0.00	0.00
9040	27A	34Y	CEN	01/25/91	1.128	0.00	> 100.00	0.00	18.64
9040	27A	34T	MT2	01/25/91	1.143	0.00	> 100.00	0.00	1.23
9041	27A	34S	CEN	01/25/91	1.153	0.00	5.92	0.00	2.27
9041	27A	34U	MT2	01/25/91	1.316	0.00	12.80	0.00	0.13
9042	27A	34S	CEN	01/25/91	1.153	0.00	6.45	0.00	9.44
9042	27A	34U	MT2	01/25/91	1.316	0.00	1.88	0.00	0.00
9043	27A	34T	CEN	01/25/91	1.148	0.00	9.24	0.00	1.27
9043	27A	34V	MT2	01/25/91	1.348	0.00	7.55	0.00	0.00
9044	27A	34T	CEN	01/25/91	1.148	0.00	11.10	0.00	0.30
9044	27A	34V	MT2	01/25/91	1.348	0.00	5.28	0.00	0.00
9045	27A	34U	CEN	01/25/91	1.253	0.00	11.00	0.00	0.00
9045	27A	34W	MT2	01/25/91	1.253	0.00	2.41	0.00	0.00
9046	27A	34U	CEN	01/25/91	1.253	0.00	> 100.00	0.00	0.31
9046	27A	34V	MT2	01/25/91	1.253	0.00	> 100.00	0.00	0.00
9047	27A	34V	CEN	01/25/91	1.231	0.00	> 100.00	0.00	0.39
9047	27A	34X	MT2	01/25/91	1.351	0.00	> 100.00	0.00	0.00
9048	27A	34V	CEN	01/25/91	1.231	0.00	> 100.00	0.00	0.00
9048	27A	34X	MT2	01/25/91	1.351	0.00	> 100.00	0.00	0.00
9049	27A	34V	CEN	01/25/91	1.394	0.00	> 100.00	0.00	4.08
9049	27A	34Y	MT2	01/25/91	1.272	0.00	10.00	0.00	0.00
9050	27A	34V	CEN	01/25/91	1.394	0.00	50.00	0.00	2.64
9050	27A	34Y	MT2	01/25/91	1.272	0.00	13.40	0.00	0.02
9051	27A	34X	CEN	01/25/91	1.305	0.00	9.03	0.00	1.34
9051	27A	34Z	MT2	01/25/91	1.250	0.00	4.07	0.00	0.32
9052	27A	34X	CEN	01/25/91	1.305	0.00	30.30	0.00	1.85

## Cumulative Summary (cont'd)

AVS	Ship No.	Pit Count	Date	Diff- mtl.	IC 50	TC 25	SI	TAI
		# Line						
9052	27A	3XZ MT2	01/25/91	1.250	0.00	45.80	0.00	0.58
9053	27A	3YT CEM	01/25/91	1.287	0.00	2.57	0.00	0.16
9053	27A	3YD MT2	01/25/91	1.231	0.00	0.32	0.00	0.00
9053	27A	40M RT2	02/22/91	1.316	0.00	0.15	0.00	0.00
9054	27A	3YT CEM	01/25/91	1.287	0.00	100.00	0.00	> 1.04
9054	27A	3YD MT2	01/25/91	1.231	0.00	100.00	0.00	0.14
9055	27A	3Y2 CEM	01/25/91	1.191	0.00	10.00	0.00	0.00
9055	27A	3Y1 MT2	01/25/91	0.842	0.00	34.90	0.00	> 0.50
9056	27A	3YZ CEM	01/25/91	1.191	0.00	> 100.00	0.00	0.00
9056	27A	3Y1 MT2	01/25/91	0.842	0.00	> 100.00	0.00	1.61
9057	27A	320 CEM	01/25/91	1.014	0.00	> 100.00	0.00	> 1.86
9057	27A	3Y2 MT2	01/25/91	1.036	0.00	56.70	0.00	0.48
9058	27A	320 CEM	01/25/91	1.014	0.00	37.60	0.00	0.53
9058	27A	3Y2 MT2	01/25/91	1.036	0.00	12.50	0.00	0.00
9059	27A	321 CEM	01/25/91	1.133	0.00	21.00	0.00	0.00
9059	27A	3Y3 MT2	01/25/91	1.112	0.00	> 100.00	0.00	> 0.33
9060	27A	321 CEM	01/25/91	1.133	0.00	> 100.00	0.00	0.41
9060	27A	3Y3 MT2	01/25/91	1.112	0.00	9.80	0.00	0.63
9061	27A	322 CEM	01/25/91	1.201	0.00	> 100.00	0.00	0.00
9061	27A	3Y4 MT2	01/25/91	1.051	0.00	96.90	0.00	0.00
9062	27A	322 CEM	01/25/91	1.201	0.00	> 100.00	0.00	0.03
9062	27A	3Y4 MT2	01/25/91	1.051	0.00	73.20	0.00	0.00
9063	27A	323 CEM	01/25/91	1.152	0.00	> 100.00	0.00	> 4.56
9063	27A	3Y5 MT2	01/25/91	1.026	0.00	100.00	0.00	0.00
9064	27A	323 CEM	01/25/91	1.152	0.00	5.67	0.00	> 3.73
9064	27A	3Y5 MT2	01/25/91	1.026	0.00	2.97	0.00	> 0.22
9065	27A	326 CEM	01/25/91	1.159	0.00	11.50	0.00	> 0.73
9065	27A	3Y6 MT2	01/25/91	1.001	0.00	6.75	0.00	0.00
9066	27A	326 CEM	01/25/91	1.159	0.00	26.30	0.00	2.11
9066	27A	3Y6 MT2	01/25/91	1.001	0.00	35.70	0.00	0.00
9067	27A	327 CEM	01/25/91	1.228	0.00	> 100.00	0.00	2.64
9067	27A	3Y7 MT2	01/25/91	0.901	0.00	1.40	0.00	> 2.73
9068	27A	.25 CEM	01/25/91	1.228	0.00	15.80	0.00	> 0.10
9068	27A	3Y7 MT2	01/25/91	0.901	0.00	15.00	0.00	> 3.42
9069	27A	326 CEM	01/25/91	1.258	0.00	19.10	0.00	0.66
9069	27A	3Y8 MT2	01/25/91	0.918	0.00	2.02	0.00	> 0.40
9070	27A	326 CEM	01/25/91	1.258	0.00	93.20	0.00	0.53
9070	27A	3Y8 MT2	01/25/91	0.918	0.00	> 100.00	0.00	0.45
9071	27A	327 CEM	01/25/91	1.219	0.00	> 100.00	0.00	> 6.20
9071	27A	3Y9 MT2	01/25/91	1.006	0.00	0.90	0.00	0.45
9072	27A	327 CEM	01/25/91	1.219	0.00	> 100.00	0.00	0.00
9072	27A	3Y9 MT2	01/25/91	1.006	0.00	46.50	0.00	> 0.93
9073	27A	328 CEM	01/25/91	1.345	0.00	3.57	0.00	0.00
9073	27A	3Y4 MT2	01/25/91	0.704	0.00	2.69	0.00	0.00
9074	27A	328 CEM	01/25/91	1.345	0.00	> 100.00	0.00	7.76
9074	27A	3Y4 MT2	01/25/91	0.704	0.00	> 100.00	0.00	> 0.40
9075	27A	329 CEM	01/25/91	1.258	0.00	9.24	0.00	6.58
9075	27A	3Y8 MT2	01/25/91	0.968	0.00	4.30	0.00	0.00
9076	27A	329 CEM	01/25/91	1.258	0.00	11.00	0.00	4.48
9076	27A	3Y8 MT2	01/25/91	0.968	0.00	1.57	0.00	> 0.02
9077	27A	32A CEM	01/25/91	1.129	0.00	10.00	0.00	> 4.61
9077	27A	3YC MT2	01/25/91	0.901	0.00	3.46	0.00	0.34
9078	27A	32A CEM	01/25/91	1.129	0.00	> 100.00	0.00	1.95
9078	27A	3YC MT2	01/25/91	0.901	0.00	> 100.00	0.00	> 0.14
9079	27A	32B CEM	01/25/91	0.900	0.00	84.00	0.00	> 2.58
9079	27A	3YD MT2	01/25/91	0.745	0.00	55.20	0.00	0.00
9080	27A	32B CEM	01/25/91	0.900	0.00	95.10	0.00	0.00
9080	27A	3YD MT2	01/25/91	0.745	0.00	61.10	0.00	0.00
9081	27A	32C CEM	01/25/91	1.003	0.00	> 100.00	0.00	> 0.06
9081	27A	3YE MT2	01/25/91	0.654	0.00	> 100.00	0.00	> 0.80
9082	27A	32G CEM	01/25/91	1.003	0.00	> 100.00	0.00	> 3.91
9082	27A	3YE MT2	01/25/91	0.654	0.00	> 100.00	0.00	0.00
9083	27A	32D CEM	01/25/91	1.076	0.00	1.91	0.00	> 0.63
9083	27A	3YF MT2	01/25/91	0.746	0.00	2.25	0.00	0.15
9084	27A	32D CEM	01/25/91	1.076	0.00	6.42	0.00	0.68
9084	27A	3YF MT2	01/25/91	0.746	0.00	8.87	0.00	0.20
9085	27A	3ZE CEM	01/25/91	1.160	0.00	2.80	0.00	0.00
9085	27A	3Y5 MT2	01/25/91	0.802	0.00	5.99	0.00	0.67
9086	27A	3ZE CEM	01/25/91	1.160	0.00	< 0.32	0.00	0.00
9086	27A	40D MT2	02/22/91	1.325	0.00	0.02	0.00	0.00
9087	27A	3ZF CEM	01/25/91	1.118	0.00	38.30	0.00	5.18
9087	27A	3YH MT2	01/25/91	0.809	0.00	2.28	0.00	0.62
9088	27A	3ZF CEM	01/25/91	1.118	0.00	45.40	0.00	1.22
9088	27A	3YH MT2	01/25/91	0.809	0.00	14.00	0.00	0.00
9089	27A	32G CEM	01/25/91	1.190	0.00	< 0.32	0.00	0.00
9089	27A	3YI MT2	01/25/91	0.900	0.00	< 0.32	0.00	0.00
9089	27A	40P MT2	02/22/91	1.280	0.00	0.01	0.00	> 0.02
9090	27A	32G CEM	01/25/91	1.190	0.00	0.42	0.00	0.00

## CUMULATIVE SUMMARY (cont'd)

AVN	Ship-	Pkt	Cell	Test	Diff-		IC 50	TC 25	SI	TAT
No.	ment	#	Line	Date	mtl.					
9090	27A	402	CEN	02/22/91	0.600		0.00	0.28	0.00	0.00
9090	27A	3Y1	MT2	01/25/91	0.990		0.00 <	0.32	0.00	0.00
9090	27A	40P	MT2	02/22/91	1.260		0.00	0.28	0.00	0.10
9091	27A	32H	CEN	01/25/91	0.912		0.00	1.57	0.00	0.00
9091	27A	3YJ	MT2	01/25/91	0.766		0.00	0.81	0.00	0.00
9091	27A	40P	MT2	02/22/91	1.343		0.00	0.19	0.00	0.00
9092	27A	32H	CEN	01/25/91	0.912		0.00	0.37	0.00	0.00
9092	27A	402	CEN	02/22/91	0.600		0.00	0.03	0.00	1.53
9092	27A	3YJ	MT2	01/25/91	0.766		0.00 <	0.32	0.00	0.00
9092	27A	40Q	MT2	02/22/91	1.363		0.00	0.02	0.00 >	0.10
9093	27A	32I	CEN	01/25/91	1.031		0.00	1.16	0.00	0.00
9093	27A	3YK	MT2	01/25/91	0.811		0.00 <	0.32	0.00	0.00
9093	27A	40R	MT2	02/22/91	1.341		0.00	0.07	0.00	0.00
9094	27A	32I	CEN	01/25/91	1.031		0.00 <	0.32	0.00	0.00
9094	27A	4E0	CEN	02/22/91	0.604		0.00	0.04	0.00	2.43
9094	27A	3YK	MT2	01/25/91	0.811		0.00 <	0.32	0.00	0.00
9094	27A	4DR	MT2	02/22/91	1.341		0.00	0.01	0.00	0.00
9095	27A	32J	CEN	01/25/91	0.919		0.00 <	0.32	0.00	0.00
9095	27A	4E0	CEN	02/22/91	0.604		0.00	0.02	0.00	0.00
9095	27A	3YL	MT2	01/25/91	0.711		0.00 <	0.32	0.00	0.00
9095	27A	40S	MT2	02/22/91	1.211		0.00	0.02	0.00	0.00
9096	27A	32J	CEN	01/25/91	0.919		0.00	3.44	0.00	0.00
9096	27A	3YL	MT2	01/25/91	0.711		0.00	1.00	0.00 >	0.22
9097	27A	32K	CEN	01/25/91	1.270		0.00	0.33	0.00	0.00
9097	27A	4E1	CEN	02/22/91	0.622		0.00	0.12	0.00 >	1.72
9097	27A	3YM	MT2	01/25/91	0.710		0.00 <	0.32	0.00	0.00
9097	27A	40S	MT2	02/22/91	1.211		0.00	0.17	0.00	0.00
9098	27A	32K	CEN	01/25/91	1.270		0.00 <	0.32	0.00	0.00
9098	27A	4E1	CEN	02/22/91	0.622		0.00	0.01	0.00	0.00
9098	27A	3YM	MT2	01/25/91	0.710		0.00 <	0.32	0.00	0.00
9098	27A	40T	MT2	02/22/91	1.363		0.00	0.06	0.00	0.10
9099	27A	32L	CEN	01/25/91	1.173		0.00	0.39	0.00	0.00
9099	27A	4E2	CEN	02/22/91	0.534		0.00	0.05	0.00	0.00
9099	27A	3YM	MT2	01/25/91	0.810		0.00 <	0.32	0.00	0.00
9099	27A	40T	MT2	02/22/91	1.363		0.00	0.17	0.00 >	0.41
9100	27A	32L	CEN	01/25/91	1.173		0.00 <	0.32	0.00	0.00
9100	27A	4E2	CEN	02/22/91	0.534		0.00	0.05	0.00	0.11
9100	27A	3YM	MT2	01/25/91	0.810		0.00 <	0.32	0.00	0.00
9100	27A	40U	MT2	02/22/91	1.324		0.00	0.06	0.00	0.15
9101	27A	32M	CEN	01/25/91	0.889		0.00 <	0.32	0.00	0.00
9101	27A	4E3	CEN	02/22/91	0.625		0.00	0.05	0.00	0.00
9101	27A	3YQ	MT2	01/25/91	0.889		0.00 <	0.32	0.00	0.00
9101	27A	40U	MT2	02/22/91	1.324		0.00	0.18	0.00	0.00
9102	27A	32N	CEN	01/25/91	0.889		0.00 <	0.32	0.00	0.00
9102	27A	40X	CEN	02/22/91	0.667		0.00	0.08	0.00	0.00
9102	27A	3YQ	MT2	01/25/91	0.889		0.00 <	0.32	0.00	0.00
9102	27A	40O	MT2	02/22/91	1.325		0.00	0.17	0.00	0.00
9103	27A	32M	CEN	01/25/91	1.109		0.00	12.90	0.00	0.00
9103	27A	3TP	MT2	01/25/91	1.045		0.00	0.47	0.00	0.00
9104	27A	32N	CEN	01/25/91	1.109		0.00	29.10	0.00	0.38
9104	27A	3TP	MT2	01/25/91	1.045		0.00	35.60	0.00 >	0.82
9105	27A	45G	CEN	01/23/91	0.814		0.00 >	100.00	0.00	0.00
9106	27A	45G	CEN	01/23/91	0.814		0.00 >	100.00	0.00 >	1.09
9107	27A	45H	CEN	01/23/91	0.776		0.00 >	100.00	0.00	6.15
9108	27A	45H	CEN	01/23/91	0.776		0.00 >	100.00	0.00	4.81
9109	27A	45I	CEN	01/23/91	1.110		0.00 >	100.00	0.00 >	0.27
9110	27A	45I	CEN	01/23/91	1.110		0.00 >	100.00	0.00	0.88
9111	27A	45J	CEN	01/23/91	1.220		0.00 >	100.00	0.00	0.00
9112	27A	45J	CEN	01/23/91	1.220		0.00	95.80	0.00	0.07
9113	27A	45K	CEN	01/23/91	1.095		0.00 >	100.00	0.00	0.00
9114	27A	45K	CEN	01/23/91	1.095		0.00 >	100.00	0.00	1.52
9115	27A	45L	CEN	01/23/91	1.036		0.00 >	100.00	0.00 >	0.64
9116	27A	45L	CEN	01/23/91	1.036		0.00 >	100.00	0.00	2.73
9117	27A	45M	CEN	01/23/91	1.131		0.00 >	100.00	0.00 >	0.13
9118	27A	45M	CEN	01/23/91	1.131		0.00 >	100.00	0.00 >	4.34
9119	27A	45M	CEN	01/23/91	0.908		0.00 >	100.00	0.00 >	1.90
9120	27A	45N	CEN	01/23/91	0.908		0.00 >	100.00	0.00	2.96
9144	25A	361	CEN	12/20/90	1.235	<	0.32	74.50	> 232.81	> 88.44
9144	25A	34H	CEN	01/04/91	1.273	>	2.84	10.00	> 3.52	> 18.83
9144	25A	490	CEN	02/05/91	1.380	<	3.20	408.00	> 127.50	> 75.27
9144	25A	490	CEN	02/05/91	1.380	>	0.19	1.00	> 5.34	> 23.17
9144	25A	3Fk	MT2	12/20/90	0.653	<	0.32	23.10	> 72.17	> 82.46
9144	25A	696	MT2	02/05/91	1.110	<	3.20	44.60	> 20.20	> 48.26
9144	25A	496	MT2	02/05/91	1.110	>	0.06	1.00	> 15.93	> 44.63
9145	25A	362	CEN	12/20/90	1.243	<	0.00	0.32	0.00	0.00
9145	25A	34W	CEN	01/04/91	1.054	<	1.00	0.00	> 5.15	
9145	25A	3FL	MT2	12/20/90	0.660	<	0.32	0.32	> 1.00	> 0.79
9146	25A	361	CEN	12/20/90	1.235	<	0.32	3.20	> 16.25	> 45.00

## CUMULATIVE SUMMARY (cont'd)

AVS No.	Ship-ment	Plt Cell Line	Test Date	Diff- mtl.	IC 50	TC 25	SI	TAI
9166 25A	34R CEM	01/04/91	1.273	0.81 >	10.00 >	12.37 >	56.14	
9166 25A	49P CEM	02/05/91	1.317 <	3.20	42.80 >	13.38 >	37.12	
9166 25A	49P CEM	02/05/91	1.317	0.00 >	1.00	0.00 >	7.99	
9166 25A	3FK MT2	12/20/90	0.653 <	0.32	7.92 >	24.76 >	54.11	
9166 25A	49T MT2	02/05/91	1.097 <	3.20 <	3.20 -	1.00	5.87	
9166 25A	49T MT2	02/05/91	1.097	0.00	0.53	0.00 >	3.73	
9167 26A	3FZ CEM	12/20/90	1.141	0.00	33.10	0.00	1.00	
9168 26A	36G CEM	12/20/90	1.407	0.00	3.20	0.00	0.00	
9169 26A	36G CEM	12/20/90	1.407	0.00	49.90	0.00 >	5.38	
11266 76	3LR CEM	01/11/91	0.769	0.00 >	100.00	0.00	1.44	
11266 76	3L6 MT2	01/11/91	1.227	0.00 >	100.00	0.00	0.33	
11267 76	3LR CEM	01/11/91	0.769	0.00 >	100.00	0.00	3.53	
11267 76	3L6 MT2	01/11/91	1.227	0.00 >	100.00	0.00 >	0.90	

- DIFRNTL = DIFF is the abbreviation for the differential. The differential is the difference in the cell control and the virus control optical densities. A differential value of > 0.5 is required for the assay to be considered satisfactory.
- TC<sub>25</sub> = The minimum drug concentration ( $\mu\text{g/ml}$ ) that reduced cell viability by 25%.
- IC<sub>50</sub> = The minimum drug concentration ( $\mu\text{g/ml}$ ) that inhibited the CPE by 50%, calculated by using a regression analysis program for semilog curve fitting.
- SI = Selectivity Index, calculated by dividing the TC<sub>25</sub> by the IC<sub>50</sub>.
- TAI = Total Antiviral Index = the area between the cytotoxicity and the antiviral curves.

## APPENDIX B

Cumulative Summary of All Compounds That  
Demonstrated Activity ( $SI > 0$ ) in HIV Primary Screen  
January 1, 1989 - April 30, 1991



APC	Ship	Loc	P/L	S/Cat	S/I/I	IC 25						IC 50						IC 95						IC 95						AI 95						AI 95						TAI 1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	A20	A21	A22	A23	A24	A25	A26	A27	A28	A29	A30	A31	A32	A33	A34	A35	A36	A37	A38	A39	A40	A41	A42	A43	A44	A45	A46	A47	A48	A49	A50	A51	A52	A53	A54	A55	A56	A57	A58	A59	A60	A61	A62	A63	A64	A65	A66	A67	A68	A69	A70	A71	A72	A73	A74	A75	A76	A77	A78	A79	A80	A81	A82	A83	A84	A85	A86	A87	A88	A89	A90	A91	A92	A93	A94	A95	A96	A97	A98	A99	A100	A101	A102	A103	A104	A105	A106	A107	A108	A109	A110	A111	A112	A113	A114	A115	A116	A117	A118	A119	A120	A121	A122	A123	A124	A125	A126	A127	A128	A129	A130	A131	A132	A133	A134	A135	A136	A137	A138	A139	A140	A141	A142	A143	A144	A145	A146	A147	A148	A149	A150	A151	A152	A153	A154	A155	A156	A157	A158	A159	A160	A161	A162	A163	A164	A165	A166	A167	A168	A169	A170	A171	A172	A173	A174	A175	A176	A177	A178	A179	A180	A181	A182	A183	A184	A185	A186	A187	A188	A189	A190	A191	A192	A193	A194	A195	A196	A197	A198	A199	A200	A201	A202	A203	A204	A205	A206	A207	A208	A209	A210	A211	A212	A213	A214	A215	A216	A217	A218	A219	A220	A221	A222	A223	A224	A225	A226	A227	A228	A229	A230	A231	A232	A233	A234	A235	A236	A237	A238	A239	A240	A241	A242	A243	A244	A245	A246	A247	A248	A249	A250	A251	A252	A253	A254	A255	A256	A257	A258	A259	A260	A261	A262	A263	A264	A265	A266	A267	A268	A269	A270	A271	A272	A273	A274	A275	A276	A277	A278	A279	A280	A281	A282	A283	A284	A285	A286	A287	A288	A289	A290	A291	A292	A293	A294	A295	A296	A297	A298	A299	A300	A301	A302	A303	A304	A305	A306	A307	A308	A309	A310	A311	A312	A313	A314	A315	A316	A317	A318	A319	A320	A321	A322	A323	A324	A325	A326	A327	A328	A329	A330	A331	A332	A333	A334	A335	A336	A337	A338	A339	A330	A331	A332	A333	A334	A335	A336	A337	A338	A339	A340	A341	A342	A343	A344	A345	A346	A347	A348	A349	A350	A351	A352	A353	A354	A355	A356	A357	A358	A359	A360	A361	A362	A363	A364	A365	A366	A367	A368	A369	A370	A371	A372	A373	A374	A375	A376	A377	A378	A379	A380	A381	A382	A383	A384	A385	A386	A387	A388	A389	A380	A381	A382	A383	A384	A385	A386	A387	A388	A389	A390	A391	A392	A393	A394	A395	A396	A397	A398	A399	A390	A391	A392	A393	A394	A395	A396	A397	A398	A399	A400	A401	A402	A403	A404	A405	A406	A407	A408	A409	A400	A401	A402	A403	A404	A405	A406	A407	A408	A409	A410	A411	A412	A413	A414	A415	A416	A417	A418	A419	A410	A411	A412	A413	A414	A415	A416	A417	A418	A419	A420	A421	A422	A423	A424	A425	A426	A427	A428	A429	A420	A421	A422	A423	A424	A425	A426	A427	A428	A429	A430	A431	A432	A433	A434	A435	A436	A437	A438	A439	A430	A431	A432	A433	A434	A435	A436	A437	A438	A439	A440	A441	A442	A443	A444	A445	A446	A447	A448	A449	A440	A441	A442	A443	A444	A445	A446	A447	A448	A449	A450	A451	A452	A453	A454	A455	A456	A457	A458	A459	A450	A451	A452	A453	A454	A455	A456	A457	A458	A459	A460	A461	A462	A463	A464	A465	A466	A467	A468	A469	A460	A461	A462	A463	A464	A465	A466	A467	A468	A469	A470	A471	A472	A473	A474	A475	A476	A477	A478	A479	A470	A471	A472	A473	A474	A475	A476	A477	A478	A479	A480	A481	A482	A483	A484	A485	A486	A487	A488	A489	A480	A481	A482	A483	A484	A485	A486	A487	A488	A489	A490	A491	A492	A493	A494	A495	A496	A497	A498	A499	A490	A491	A492	A493	A494	A495	A496	A497	A498	A499	A500	A501	A502	A503	A504	A505	A506	A507	A508	A509	A500	A501	A502	A503	A504	A505	A506	A507	A508	A509	A510	A511	A512	A513	A514	A515	A516	A517	A518	A519	A500	A501	A502	A503	A504	A505	A506	A507	A508	A509	A510	A511	A512	A513	A514	A515	A516	A517	A518	A519	A520	A521	A522	A523	A524	A525	A526	A527	A528	A529	A520	A521	A522	A523	A524	A525	A526	A527	A528	A529	A530	A531	A532	A533	A534	A535	A536	A537	A538	A539	A530	A531	A532	A533	A534	A535	A536	A537	A538	A539	A540	A541	A542	A543	A544	A545	A546	A547	A548	A549	A540	A541	A542	A543	A544	A545	A546	A547	A548	A549	A550	A551	A552	A553	A554	A555	A556	A557	A558	A559	A550	A551	A552	A553	A554	A555	A556	A557	A558	A559	A560	A561	A562	A563	A564	A565	A566	A567	A568	A569	A560	A561	A562	A563	A564	A565	A566	A567	A568	A569	A570	A571	A572	A573	A574	A575	A576	A577	A578	A579	A570	A571	A572	A573	A574	A575	A576	A577	A578	A579	A580	A581	A582	A583	A584	A585	A586	A587	A588	A589	A580	A581	A582	A583	A584	A585	A586	A587	A588	A589	A590	A591	A592	A593	A594	A595	A596	A597	A598	A599	A590	A591	A592	A593	A594	A595	A596	A597	A598	A599	A600	A601	A602	A603	A604	A605	A606	A607	A608	A609	A600	A601	A602	A603	A604	A605	A606	A607	A608	A609	A610	A611	A612	A613	A614	A615	A616	A617	A618	A619	A600	A601	A602	A603	A604	A605	A606	A607	A608	A609	A610	A611	A612	A613	A614	A615	A616	A617	A618	A619	A620	A621	A622	A623	A624	A625	A626	A627	A628	A629	A620	A621	A622	A623	A624	A625	A626	A627	A628	A629	A630	A631	A632	A633	A634	A635	A636	A637	A638	A639	A630	A631	A632	A633	A634	A635	A636	A637	A638	A639	A640	A641	A642	A643	A644	A645	A646	A647	A648	A649	A640	A641	A642	A643	A644	A645	A646	A647	A648	A649	A650	A651	A652	A653	A654	A655	A656	A657	A658	A659	A650	A651	A652	A653	A654	A655	A656	A657	A658	A659	A660	A661	A662	A663	A664	A665	A666	A667	A668	A669	A660	A661	A662	A663	A664	A665	A666	A667	A668	A669	A670	A671	A672	A673	A674	A675	A676	A677	A678	A679	A670	A671	A672	A673	A674	A675	A676	A677	A678	A679	A680	A681	A682	A683	A684	A685	A686	A687	A688	A689	A680	A681	A682	A683	A684	A685	A686	A687	A688	A689	A690	A691	A692	A693	A694	A695	A696	A697	A698	A699	A690	A691	A692	A693	A694	A695	A696	A697	A698	A699	A700	A701	A702	A703	A704	A705	A706	A707	A708	A709	A700	A701	A702	A703	A704	A705	A706	A707	A708	A709	A710	A711	A712	A713	A714	A715	A716	A717	A718	A719	A700	A701	A702	A703	A704	A705	A706	A707	A708	A709	A710	A711	A712	A713	A714	A715	A716	A717	A718	A719	A720	A721	A722	A723	A724	A725	A726	A727	A728	A729	A720	A721	A722	A723	A724	A725	A726	A727	A728	A729	A730	A731	A732	A733	A734	A735	A736	A737	A738	A739	A730	A731	A732	A733	A734	A735	A736	A737	A738	A739	A740	A741	A742	A743	A744	A745	A746	A747	A748	A749	A740	A741	A742	A743	A744	A745	A746	A747	A748	A749	A750	A751	A752	A753	A754	A755	A756	A757	A758	A759	A750	A751	A752	A753	A754	A755	A756	A757	A758	A759	A760	A761	A762	A763	A764	A765	A766	A767	A768	A769	A760	A761	A762	A763	A764	A765	A766	A767	A768	A769	A770	A771	A772	A773	A774	A775	A776	A777	A778	A779	A770	A771	A772	A773	A774	A775	A776	A777	A778	A779	A780	A781	A782	A783	A784	A785	A786	A787	A788	A789	A780	A781	A782	A783	A784	A785	A786	A787	A788	A789	A790	A791	A792	A793	A794	A795	A796	A797	A798	A799	A790	A791	A792	A793	A794	A795	A796	A797	A798	A799	A800	A801	A802	A803	A804	A805	A806	A807	A808	A809	A800	A801	A802	A803	A804	A805	A806	A807	A808	A809	A810	A811	A812	A813	A814	A815	A816	A817	A818	A819	A810	A811	A812	A813	A814	A815	A816	A817	A818	A819	A820	A821	A822	A823	A824	A825	A826	A827	A828	A829	A820	A821	A822	A823	A824	A825	A826	A827	A828	A829	A830	A831	A832	A833	A834	A835	A836	A837	A838	A839	A830	A831	A832	A833	A834	A835	A836	A837	A838	A839	A840	A841	A842	A843	A844	A845	A846	A847	A848	A849	A840	A841	A842	A843	A844	A845	A846	A847	A848	A849	A850	A851	A852	A853	A854	A855	A856	A857	A858	A859	A850	A851	A852	A853	A854	A855	A856	A857	A858	A859	A860	A861	A862	A863	A864	A865	A866	A867	A868	A869	A860	A861	A862	A863	A864	A865	A866	A867	A868	A869	A870	A871	A872	A873	A874	A875	A876	A877	A878	A879	A870	A871	A872	A873	A874	A875	A876	A877	A878	A879	A880	A881	A882	A883	A884	A885	A886	A887	A

Av.	Min	Max	Test	Per	Col	01/11/70	1C	2C	1C	2C	1C	2C	1C	2C	1C	2C	1C	2C	1C	2C	1C	2C	1C	2C	
3342	70	11/11/70	340	CEN	0.620	0.60	100.00	0.60	0.60	0.60	100.00	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	
3342	75	12/11/70	340	CEN	0.575	7.40	100.00	12.54	92.48	100.00	100.00	1.00	0.00	100.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3342	76	11/11/70	340	R12	1.153	8.60	100.00	0.80	0.80	0.80	100.00	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	
3374	69	05/14/70	101	CEN	1.200	91.40	100.00	1.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3374	70	11/11/70	340	CEN	0.827	61.60	100.00	1.42	12.41	100.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3374	75	12/11/70	340	CEN	0.574	2.80	100.00	13.41	12.41	100.00	100.00	7.77	30.40	100.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3374	69	05/15/70	102	R12	0.974	21.90	100.00	7.17	41.42	100.00	100.00	2.42	91.40	100.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3374	74	11/11/70	340	R12	1.129	42.80	100.00	2.33	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3392	65	05/10/70	103	CEN	1.060	0.32	91.00	206.74	0.32	100.00	312.56	2.01	0.01	100.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3392	51	05/09/70	63P	R12	0.753	1.80	91.10	1.30	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3392	41	10/11/70	103	R12	1.030	19.20	49.00	2.54	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3392	65	05/10/70	103	R12	1.157	65.70	97.20	2.13	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4032	49	06/21/70	241	CEN	0.742	61.20	24.40	6.30	0.00	0.00	100.00	41.70	43.10	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4032	36	02/01/70	63P	R12	1.926	14.20	100.00	6.10	41.70	100.00	100.00	2.43	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4032	36	06/01/70	600	R12	1.222	11.00	100.00	6.00	20.20	100.00	100.00	4.95	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4032	45	05/15/70	103	R12	1.104	19.80	100.00	9.25	17.50	100.00	100.00	5.70	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4032	49	06/01/70	103	R12	1.155	21.60	100.00	6.51	17.50	100.00	100.00	5.40	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4035	26	12/01/70	63P	R12	1.902	6.90	100.00	11.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4035	26	04/01/70	600	R12	1.222	6.90	100.00	2.75	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4035	45	05/15/70	103	R12	1.064	8.43	100.00	1.50	1.50	100.00	100.00	44.45	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4036	64	06/15/70	220	CEN	1.848	15.70	100.00	6.34	26.90	100.00	100.00	3.71	100.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4036	47	06/21/70	241	CEN	0.782	14.10	100.00	7.10	19.80	100.00	100.00	5.05	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4036	47	02/20/70	63P	CEN	0.779	19.50	5.50	5.50	16.80	100.00	100.00	6.25	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4036	36	12/01/70	63P	R12	1.902	6.34	95.00	15.00	15.10	100.00	100.00	6.42	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4036	34	06/01/70	600	R12	1.064	8.43	100.00	4.34	12.30	100.00	100.00	12.40	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4036	45	06/20/70	103	R12	1.253	5.91	100.00	16.86	12.90	100.00	100.00	7.75	20.20	100.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4036	49	02/20/70	63P	R12	1.356	7.80	7.80	1.13	14.30	39.90	4.20	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4075	14	01/28/70	103	CEN	1.163	8.55	100.00	11.70	16.10	100.00	100.00	7.00	29.20	100.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4075	49	02/21/70	241	CEN	0.764	1.00	100.00	160.00	12.30	100.00	100.00	8.11	29.10	100.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4075	45	02/20/70	63P	CEN	0.779	1.00	100.00	96.30	3.73	100.00	100.00	24.26	37.20	100.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4075	46	01/08/70	601	R12	1.129	36.30	100.00	2.70	34.00	100.00	100.00	1.70	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4075	45	02/20/70	63P	R12	1.354	29.80	100.00	2.35	79.00	100.00	100.00	2.26	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4593	124	11/01/70	363	CEN	1.261	6.43	100.00	10.42	64.00	100.00	100.00	1.10	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4593	124	11/11/70	363	CEN	0.751	12.00	100.00	12.00	10.51	1.04	24.00	15.40	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4593	124	11/01/70	21P	R12	1.221	34.30	100.00	2.92	94.30	100.00	100.00	0.17	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4593	124	11/14/70	35C	R12	0.464	61.90	100.00	16.10	15.90	15.90	100.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4593	74	11/11/70	363	CEN	1.161	6.32	100.00	112.50	0.32	100.00	100.00	0.32	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4593	64	11/01/70	307	CEN	0.822	0.82	100.00	120.91	0.41	100.00	100.00	0.41	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4593	64	02/20/70	41A	CEN	0.754	0.44	100.00	226.00	0.61	100.00	100.00	0.61	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4593	64	11/11/70	363	R12	1.320	1.17	12.30	10.51	1.04	24.00	15.40	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4593	64	11/01/70	21P	R12	1.221	0.32	100.00	90.43	0.17	94.30	100.00	0.17	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4593	64	11/01/70	307	CEN	0.644	0.61	100.00	100.00	0.61	100.00	100.00	0.61	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4593	64	11/11/70	363	CEN	0.754	0.75	100.00	100.00	0.75	100.00	100.00	0.75	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4593	64	02/20/70	41A	CEN	0.754	1.30	100.00	2.44	87.90	100.00	100.00	1.14	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4593	64	11/01/70	21P	R12	1.221	0.32	100.00	312.50	0.32	100.00	100.00														











avg	slip no.	Year	PLT Date	SLT	g	CNT	SLT	PLT	g	CNT	SLT	PLT	g	CNT	SLT	PLT	g	CNT	SLT	PLT	g	CNT	SLT	PLT	g	CNT	
4202	42	04/24/90	19C CEN	0.403	0.32	100.00	312.50	25.90	0.32	100.00	2.70	100.00	0.50	100.00	1.00	100.00	2.70	100.00	0.50	100.00	1.00	100.00	2.70	100.00	0.50	100.00	
4202	42	07/24/90	19D CEN	0.400	0.30	100.00	192.44	9.00	0.30	100.00	0.50	100.00	0.30	100.00	0.50	100.00	0.30	100.00	0.50	100.00	0.30	100.00	0.50	100.00	0.30	100.00	
4202	42	08/07/90	20A CEN	0.400	0.30	100.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
4202	42	02/04/90	19G R12	0.304	12.70	100.00	7.97	20.80	100.00	4.80	42.20	100.00	4.35	41.36	100.00	1.22	4.40	100.00	1.23	4.35	100.00	1.22	4.40	100.00	1.23	4.35	100.00
4202	42	04/24/90	19E R12	1.801	9.16	100.00	10.92	15.70	100.00	6.35	100.00	8.10	100.00	10.92	100.00	10.92	100.00	10.92	100.00	10.92	100.00	10.92	100.00	10.92	100.00	10.92	100.00
4203	42	04/26/90	19C CEN	0.403	0.32	100.00	11.63	0.00	0.32	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4203	42	02/08/90	19I R12	1.047	41.00	100.00	2.39	55.90	100.00	1.70	66.49	100.00	1.04	1.04	100.00	1.04	1.04	100.00	1.04	1.04	100.00	1.04	1.04	100.00	1.04	1.04	100.00
4203	42	04/26/90	19F R12	0.935	36.70	100.00	2.71	57.50	100.00	1.74	66.00	100.00	1.04	1.04	100.00	1.04	1.04	100.00	1.04	1.04	100.00	1.04	1.04	100.00	1.04	1.04	100.00
4205	42	02/08/90	19Z R12	1.000	37.40	100.00	2.47	52.80	100.00	1.92	53.70	100.00	1.07	1.07	100.00	1.07	1.07	100.00	1.07	1.07	100.00	1.07	1.07	100.00	1.07	1.07	100.00
4205	42	04/24/90	19E R12	0.915	0.32	100.00	312.50	21.10	100.00	4.33	67.80	100.00	1.15	4.33	100.00	1.15	4.33	100.00	1.15	4.33	100.00	1.15	4.33	100.00	1.15	4.33	100.00
4205	74	11/13/90	34A R12	1.120	33.90	100.00	2.95	54.40	100.00	2.04	54.40	100.00	1.07	1.07	100.00	1.07	1.07	100.00	1.07	1.07	100.00	1.07	1.07	100.00	1.07	1.07	100.00
4207	74	11/13/90	35T CEN	0.754	42.40	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4207	82	02/06/90	19K R12	1.152	12.40	49.00	3.94	17.40	44.00	3.76	49.00	49.00	1.97	1.97	2.70	1.97	1.97	2.70	1.97	1.97	2.70	1.97	1.97	2.70	1.97	1.97	2.70
4207	82	04/27/90	19L R12	1.003	4.12	100.00	26.24	35.50	100.00	2.32	90.20	100.00	1.11	1.11	2.32	1.11	1.11	2.32	1.11	1.11	2.32	1.11	1.11	2.32	1.11	1.11	2.32
4207	74	11/13/90	34A R12	1.120	0.00	100.00	9.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	100.00
4208	42	04/26/90	19D CEN	0.427	0.32	100.00	312.50	1.20	100.00	10.45	100.00	10.45	100.00	10.45	100.00	10.45	100.00	10.45	100.00	10.45	100.00	10.45	100.00	10.45	100.00	10.45	100.00
4208	42	08/30/90	202 CEN	1.146	0.32	100.00	22.63	0.40	4.44	100.00	15.44	100.00	1.04	1.04	100.00	1.04	1.04	100.00	1.04	1.04	100.00	1.04	1.04	100.00	1.04	1.04	100.00
4208	42	08/27/90	19L R12	1.003	0.32	100.00	22.70	22.70	1.75	100.00	57.03	100.00	2.14	2.14	100.00	2.14	2.14	100.00	2.14	2.14	100.00	2.14	2.14	100.00	2.14	2.14	100.00
4209	42	04/26/90	19D CEN	0.427	0.32	100.00	312.50	2.81	100.00	35.34	100.00	35.34	100.00	35.34	100.00	35.34	100.00	35.34	100.00	35.34	100.00	35.34	100.00	35.34	100.00	35.34	100.00
4209	42	07/24/90	19P CEN	0.833	0.20	100.00	23.82	4.40	100.00	10.10	100.00	24.76	100.00	24.76	100.00	24.76	100.00	24.76	100.00	24.76	100.00	24.76	100.00	24.76	100.00	24.76	100.00
4209	42	08/07/90	203 CEN	1.167	5.12	100.00	18.43	10.70	100.00	0.34	21.82	100.00	0.34	21.82	100.00	0.34	21.82	100.00	0.34	21.82	100.00	0.34	21.82	100.00	0.34	21.82	100.00
4209	42	02/06/90	19K R12	1.101	2.92	100.00	14.30	4.30	100.00	2.22	100.00	44.97	100.00	44.97	100.00	44.97	100.00	44.97	100.00	44.97	100.00	44.97	100.00	44.97	100.00	44.97	100.00
4210	42	04/01/90	16B CEN	0.932	1.20	100.00	76.85	2.25	100.00	44.48	100.00	44.48	100.00	44.48	100.00	44.48	100.00	44.48	100.00	44.48	100.00	44.48	100.00	44.48	100.00	44.48	100.00
4210	42	07/24/90	19V CEN	0.819	0.14	100.00	291.01	0.22	100.00	44.97	100.00	44.97	100.00	44.97	100.00	44.97	100.00	44.97	100.00	44.97	100.00	44.97	100.00	44.97	100.00	44.97	100.00
4210	42	08/07/90	201 CEN	1.147	1.00	100.00	100.00	1.55	100.00	44.37	100.00	44.37	100.00	44.37	100.00	44.37	100.00	44.37	100.00	44.37	100.00	44.37	100.00	44.37	100.00	44.37	100.00
4210	42	02/04/90	19L R12	1.101	5.34	100.00	18.05	12.50	100.00	4.32	30.70	100.00	5.27	30.70	100.00	5.27	30.70	100.00	5.27	30.70	100.00	5.27	30.70	100.00	5.27	30.70	100.00
4211	42	04/01/90	16A CEN	0.932	4.00	100.00	75.03	1.70	100.00	17.70	20.30	100.00	4.35	20.30	100.00	4.35	20.30	100.00	4.35	20.30	100.00	4.35	20.30	100.00	4.35	20.30	100.00
4211	42	07/24/90	19P CEN	0.813	2.41	100.00	41.43	4.39	100.00	15.4	6.00	100.00	15.4	6.00	100.00	15.4	6.00	100.00	15.4	6.00	100.00	15.4	6.00	100.00	15.4	6.00	100.00
4211	42	08/07/90	204 CEN	1.210	16.40	72.30	7.25	17.30	100.00	5.70	17.30	100.00	4.19	17.30	100.00	4.19	17.30	100.00	4.19	17.30	100.00	4.19	17.30	100.00	4.19	17.30	100.00
4211	42	02/07/90	19A R12	1.220	35.70	100.00	2.80	30.30	100.00	1.49	30.30	100.00	1.49	30.30	100.00	1.49	30.30	100.00	1.49	30.30	100.00	1.49	30.30	100.00	1.49	30.30	100.00
4211	42	06/27/90	19C R12	1.131	22.70	100.00	4.41	42.70	100.00	2.34	42.70	100.00	2.34	42.70	100.00	2.34	42.70	100.00	2.34	42.70	100.00	2.34	42.70	100.00	2.34	42.70	100.00
4211	74	11/27/90	37A R12	0.713	21.70	100.00	4.41	42.70	100.00	2.34	42.70	100.00	2.34	42.70	100.00	2.34	42.70	100.00	2.34	42.70	100.00	2.34	42.70	100.00	2.34	42.70	100.00
4212	42	04/01/90	16A CEN	0.879	0.32	100.00	312.50	1.17	100.00	65.63	7.69	100.00	1.17	100.00	65.63	7.69	100.00	1.17	100.00	65.63	7.69	100.00	1.17	100.00	65.63	7.69	100.00
4212	42	08/07/90	204 CEN	1.210	0.32	100.00	231.36	1.70	100.00	55.90	4.44	100.00	1.70	100.00	55.90	4.44	100.00	1.70	100.00	55.90	4.44	100.00	1.70	100.00	55.90	4.44	100.00
4212	42	01/21/90	250 CEN	0.744	1.21	100.00	81.50	1.49	100.00	59.21	3.00	100.00	1.49	100.00	59.21	3.00	100.00	1.49	100.00	59.21	3.00	100.00	1.49	100.00	59.21	3.00	100.00
4212	42	02/07/90	19S R12	1.224	4.69	100.00	16.95	15.40	100.00	15.40	16.95	100.00	4.44	16.95	100.00	4.44	16.95	100.00	4.44	16.95	100.00	4.44	16.95	100.00	4.44	16.95	100.00
4212	42	06/27/90	19C R12	1.144	1.16	100.00	7.32	100.00	11.36	10.16	100.00	11.36	10.16	100.00	11.36	10.16	100.00	11.36	10.16	100.00	11.36	10.16	100.00	11.36	10.16	100.00	
4212	74	11/27/90	37A R12	0.713	21.70	100.00	4.41	42.70	100.00	2.34	42.70	100.00	2.34	42.70	100.00	2.34	42.70	100.00	2.34	42.70	100.00	2.34	42.70	100.00	2.34	42.70	100.00
4213	42	04/01/90	16A CEN	0.879	0.32	100.00	312.50	1.17	100.00	65.63	7.69	100.00	1.17	100.00	65.63	7.69	100.00	1.17	100.00	65.63</							

Av.	Spp.	Loc.	Pct.	Cell	Dist.	IC 25	IC 25	AI 25	IC 50	IC 50	AI 50	IC 95	IC 95	AI 95	SI	SI	TAI	%
4216	N	11/27/90 300 CEN	1.126	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4216	A2	02/07/90 195 RT2	1.276	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4216	A2	04/27/90 194 RT2	1.162	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4216	A2	11/27/90 370 RT2	0.713	3.00	20.20	8.00	8.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
4217	A2	06/16/90 231 CEN	0.561	4.70	100	90	20.87	6.67	100	90	11.51	20.80	100	90	11.51	20.80	100	90
4217	A2	02/07/90 194 RT2	1.347	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4217	A2	04/27/90 194 RT2	1.162	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4218	A2	06/16/90 230 CEN	0.616	14.80	100	90	1.91	34.20	100	90	2.91	8.80	100	90	2.91	8.80	100	90
4218	A2	02/07/90 195 RT2	1.247	1.04	7.13	4.01	4.01	7.13	100	90	10.76	10.76	100	90	10.76	10.76	100	90
4218	A2	04/27/90 195 RT2	1.176	2.76	100	90	32.77	4.74	100	90	21.16	100	100	90	21.16	100	90	100
4218	A2	06/16/90 195 RT2	1.121	1.81	100	90	190.34	2.32	100	90	91.11	9.37	100	90	91.11	9.37	100	90
4219	A2	06/07/90 205 CEN	1.135	3.00	100	90	0.00	6.00	100	90	0.00	6.00	100	90	0.00	6.00	100	90
4219	A2	11/27/90 300 CEN	1.263	61.50	100	90	1.00	6.00	100	90	6.00	6.00	100	90	6.00	6.00	100	90
4219	A2	02/07/90 197 RT2	1.207	17.13	100	90	5.63	31.84	100	90	2.87	90.00	100	90	2.87	90.00	100	90
4219	A2	04/27/90 192 RT2	1.180	19.40	100	90	9.12	50.96	100	90	6.56	6.56	100	90	6.56	6.56	100	90
4219	A2	06/16/90 198 RT2	1.176	11.80	100	90	8.44	20.19	100	90	6.96	81.60	100	90	6.96	81.60	100	90
4219	A2	07/14/90 191 RT2	1.147	16.90	100	90	33.19	22.27	100	90	11.23	100	100	90	11.23	100	90	100
4219	A2	11/27/90 373 RT2	0.911	3.87	100	90	25.84	32.86	100	90	3.15	100	100	90	3.15	100	100	100
4220	A2	06/16/90 224 CEN	1.069	16.90	100	90	9.17	15.50	100	90	4.51	20.80	100	90	4.51	20.80	100	90
4220	A2	02/07/90 197 RT2	1.207	3.48	100	90	2.17	26.72	100	90	20.21	9.32	100	90	20.21	9.32	100	90
4220	A2	04/27/90 198 RT2	1.064	3.14	100	90	27.91	1.92	100	90	20.76	9.30	100	90	20.76	9.30	100	90
4221	A2	06/16/90 199 CEN	1.150	14.80	100	90	1.94	22.73	100	90	1.46	86.12	100	90	1.46	86.12	100	90
4221	A2	02/07/90 198 RT2	1.222	16.30	100	90	4.24	34.60	100	90	2.87	0.00	100	90	2.87	0.00	100	90
4222	A2	06/16/90 198 CEN	1.156	39.80	100	90	2.50	59.36	100	90	1.49	0.00	100	90	1.49	0.00	100	90
4222	A2	02/07/90 198 RT2	1.222	14.40	100	90	6.87	36.20	100	90	2.76	0.00	100	90	2.76	0.00	100	90
4223	A2	06/24/90 198 CEN	1.116	8.87	100	90	11.77	14.40	100	90	6.93	29.50	100	90	6.93	29.50	100	90
4223	A2	02/07/90 199 RT2	1.270	4.03	100	90	24.82	5.45	100	90	16.33	9.41	100	90	16.33	9.41	100	90
4224	A2	06/26/90 198 CEN	1.150	2.49	100	90	16.22	13.18	100	90	7.49	23.30	100	90	7.49	23.30	100	90
4225	A2	06/26/90 199 RT2	1.270	5.14	100	90	19.44	12.30	100	90	6.11	29.10	100	90	6.11	29.10	100	90
4225	A2	06/26/90 198 CEN	1.150	18.40	100	90	9.45	16.70	100	90	4.17	62.20	100	90	4.17	62.20	100	90
4225	A2	02/15/90 224 CEN	1.072	93.90	100	90	1.87	0.60	100	90	5.20	100	100	90	5.20	100	100	100
4225	A2	02/07/90 191 RT2	1.235	11.16	100	90	7.24	15.80	100	90	5.46	36.80	100	90	5.46	36.80	100	90
4226	A2	06/15/90 198 CEN	1.072	70.10	100	90	1.20	0.80	100	90	6.00	100	100	90	6.00	100	100	100
4226	A2	02/13/90 194 RT2	1.053	0.00	100	90	0.00	34.80	100	90	2.87	100	100	90	2.87	100	100	100
4227	A2	06/24/90 197 CEN	1.221	11.40	100	90	7.34	14.30	100	90	6.15	29.70	100	90	6.15	29.70	100	90
4227	A2	06/24/90 198 CEN	1.053	44.30	100	90	2.16	70.10	100	90	1.42	8.00	100	90	1.42	8.00	100	90
4227	A2	02/13/90 194 RT2	1.053	7.61	100	90	13.15	13.15	100	90	7.26	29.40	100	90	7.26	29.40	100	90
4228	A2	06/24/90 197 CEN	1.221	11.40	100	90	5.44	0.00	100	90	6.00	100	100	90	6.00	100	100	100
4228	A2	06/15/90 220 CEN	0.904	0.00	100	90	0.00	100	100	90	0.00	100	100	90	0.00	100	100	100
4229	A2	06/24/90 197 CEN	0.823	0.82	100	90	0.82	0.82	100	90	0.82	0.82	100	90	0.82	0.82	100	90
4229	A2	06/15/90 224 CEN	0.823	34.40	100	90	2.91	42.70	100	90	1.61	0.00	100	90	1.61	0.00	100	90
4230	A2	04/01/90 198 CEN	1.064	0.00	100	90	0.00	0.00	100	90	0.00	0.00	100	90	0.00	0.00	100	90

Ave.	Mile-	Test	Pct.	Date	# Cells	0.111.	IC 25	IC 25	AI 25	IC 50	IC 50	IC 50	AI 50	IC 95	IC 95	IC 95	AI 95	SI	TAI	C		
6238	44	06/26/90	182 CEM	1,157	26.30	100.00	4.89	45.30	100.00	1.21	92.44	100.00	1.00	2.21	27.44	2.21	27.44	2.21	27.44	2.21		
6239	42	02/13/90	145 M12	1,027	16.92	100.00	5.31	22.50	100.00	1.41	94.53	100.00	1.15	1.43	22.74	1.43	22.74	1.43	22.74	1.43		
6239	61	02/13/90	163 M12	1,160	35.92	100.00	5.17	48.40	251.00	5.14	91.00	100.00	1.75	1.75	1.61	19.96	1.75	1.61	19.96	1.75	19.96	1.75
6240	14	12/27/89	149 CEM	0.907	5.81	100.00	19.97	4.33	100.00	12.81	6.88	100.00	0.00	12.81	37.91	12.81	37.91	12.81	37.91	12.81		
6240	14	02/22/90	157 CEM	0.461	2.18	100.00	37.37	1.95	100.00	30.19	20.50	100.00	0.00	20.50	50.94	20.50	50.94	20.50	50.94	20.50		
6240	14	12/07/89	148 M12	1,157	1.32	100.00	45.44	1.97	100.00	16.74	70.80	100.00	1.43	14.76	44.97	14.76	44.97	14.76	44.97	14.76		
6240	14	12/20/89	159 M12	1,352	16.29	100.00	9.78	17.70	100.00	5.65	73.10	100.00	1.20	5.65	32.16	5.65	32.16	5.65	32.16	5.65		
6241	14	12/20/89	149 CEM	0.907	6.32	100.00	6.44	6.32	100.00	312.50	6.32	100.00	0.00	312.50	44.87	6.32	44.87	6.32	44.87	6.32		
6241	14	02/22/90	157 CEM	0.461	3.32	100.00	112.50	6.32	100.00	312.50	6.32	100.00	0.00	312.50	73.84	6.32	73.84	6.32	73.84	6.32		
6241	14	12/07/89	148 M12	1,352	8.32	100.00	6.32	6.32	100.00	312.50	6.32	100.00	0.00	312.50	90.86	6.32	90.86	6.32	90.86	6.32		
6241	14	12/20/89	156 M12	1,352	8.32	100.00	279.81	6.31	100.00	305.40	6.31	100.00	0.00	305.40	273.63	6.31	273.63	6.31	273.63	6.31		
6242	14	12/20/89	148 CEM	0.924	9.32	100.00	16.89	6.44	11.30	20.00	6.44	100.00	0.00	20.00	44.19	6.44	44.19	6.44	44.19	6.44		
6242	14	12/07/89	148 M12	1,159	5.44	100.00	27.32	12.19	100.00	8.26	27.00	100.00	1.45	27.00	44.19	1.45	44.19	1.45	44.19	1.45		
6242	14	12/20/89	156 M12	1,364	5.16	100.00	19.36	11.54	100.00	8.67	35.90	100.00	3.46	35.90	37.75	3.46	37.75	3.46	37.75	3.46		
6455	43	04/12/90	167 CEM	1,166	6.49	100.00	203.84	17.54	100.00	5.71	9.00	100.00	0.00	5.71	34.96	5.71	34.96	5.71	34.96	5.71		
6455	43	01/28/90	160 M12	1,357	6.00	100.00	6.00	6.00	100.00	6.00	6.00	100.00	0.00	6.00	4.00	6.00	4.00	6.00	4.00			
6455	72	09/06/90	256 M12	1,183	6.00	100.00	6.00	6.00	100.00	6.00	6.00	100.00	0.00	6.00	3.80	6.00	3.80	6.00	3.80			
6457	43	04/12/90	168 CEM	1,220	4.44	100.00	21.37	7.50	100.00	1.70	9.00	100.00	0.00	9.00	27.73	9.00	27.73	9.00	27.73	9.00		
6457	43	03/28/90	169 M12	1,304	6.00	100.00	6.00	6.00	100.00	6.00	6.00	100.00	0.00	6.00	3.59	6.00	3.59	6.00	3.59			
6440	43	04/12/90	169 CEM	1,444	1.16	42.49	52.81	22.42	92.70	4.16	6.00	100.00	0.00	6.00	30.24	6.00	30.24	6.00	30.24	6.00		
6440	43	01/28/90	166 M12	1,500	6.00	55.30	6.00	6.00	100.00	6.00	6.00	100.00	0.00	6.00	1.70	6.00	1.70	6.00	1.70			
6440	72	09/06/90	256 M12	1,160	6.00	75.50	6.00	6.00	100.00	6.00	6.00	100.00	0.00	6.00	0.90	6.00	0.90	6.00	0.90			
6444	43	04/26/90	164 CEM	0.460	6.32	51.80	161.04	6.32	44.40	15.29	6.32	100.00	0.00	6.32	30.47	6.32	30.47	6.32	30.47	6.32		
6444	43	04/24/90	164 M12	1,279	5.33	48.80	13.86	4.99	44.40	15.29	9.33	97.90	10.49	9.75	35.67	9.75	35.67	9.75	35.67	9.75		
6447	46	07/19/90	167 CEM	0.751	1.32	4.80	16.75	0.00	36.40	0.00	91.30	0.00	0.00	0.00	91.30	9.01	9.01	9.01	9.01	9.01		
6447	74	11/27/90	164 CEM	1,265	6.09	8.87	10.08	6.08	21.00	6.08	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00			
6447	74	11/27/90	160 M12	1,095	4.57	7.47	1.45	6.27	14.30	1.72	6.00	27.00	0.00	6.00	6.00	6.00	6.00	6.00	6.00			
6447	74	11/27/90	171 M12	0.911	6.15	6.51	6.00	6.00	9.87	6.00	6.00	27.00	0.00	6.00	6.00	6.00	6.00	6.00	6.00			
6442	46	08/16/90	256 CEM	0.717	6.00	49.00	6.00	6.00	46.00	3.71	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00			
6442	73	09/28/90	261 M12	0.944	6.00	9.34	17.80	44.00	1.45	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00			
6442	44	07/11/90	154 M12	1,154	12.40	49.00	1.15	2.03	1.15	1.44	6.00	6.00	1.00	6.00	1.00	16.59	1.00	16.59	1.00	16.59		
6442	73	09/28/90	262 M12	1,064	6.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00		
6510	14	07/05/90	168 CEM	1,164	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66		
6510	14	06/04/90	191 M12	0.834	0.92	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00		
6511	14	07/17/90	168 M12	1,217	1.61	307.00	160.39	3.12	566.00	181.21	14.70	100.00	0.00	14.70	100.00	41.37	100.00	41.37	100.00	41.37		
6511	72	09/04/90	281 M12	1,160	6.22	100.00	16.08	12.40	100.00	4.16	8.00	100.00	0.00	8.00	37.01	8.00	37.01	8.00	37.01	8.00		
6512	14	07/05/90	168 CEM	1,164	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66		
6512	14	06/04/90	194 M12	0.954	1.42	100.00	70.39	1.42	100.00	10.32	6.00	100.00	0.00	10.32	10.32	6.00	45.49	10.32	45.49	10.32		
6512	14	07/17/90	154 M12	1,217	1.49	199.00	117.79	3.25	473.00	105.77	19.30	100.00	0.00	19.30	100.00	50.94	100.00	50.94	100.00	50.94		
6512	72	09/04/90	281 M12	1,160	4.74	100.00	15.99	12.50	100.00	4.11	20.10	100.00	0.00	20.10	3.44	20.10	3.44	20.10	3.44	20.10		

Ave. no.	Min/ Max	Test Date	P/C coll.	P/H	IC 25	IC 50	IC 75	IC 90	AI 25	AI 50	AI 75	AI 90	IC 95	IC 99	AI 95	AI 99	C	
																	IC	AI
6777 148	07/24/90	105 CEM	0.839	1.87	100.00	25.84	32.70	100.00	1.86	97.49	100.00	1.12	1.86	1.12	1.12	24.32	24.32	
6777 72	09/20/90	261 CEM	0.944	2.94	11.00	0.90	100.00	11.00	0.90	8.72	100.00	0.75	0.75	0.75	0.75	23.49	23.49	
6777 148	07/24/90	106 NT2	1.195	50.80	100.00	1.72	0.90	100.00	1.72	0.90	6.80	100.00	0.75	0.75	0.75	0.75	8.75	8.75
6777 72	09/20/90	262 NT2	1.084	1.86	100.00	1.86	1.86	100.00	1.86	1.86	13.66	97.49	100.00	1.12	1.12	15.66	15.66	
6777 72	10/24/90	240 NT2	0.877	254.68	100.00	2.81	0.90	100.00	1.45	0.90	0.90	0.90	0.90	0.90	0.90	1.45	1.45	
6783 46	08/14/90	212 CEM	1.169	32.80	100.00	2.13	11.70	100.00	1.86	0.90	100.00	0.90	0.90	0.90	0.90	12.53	12.53	
6783 46	08/03/90	103 NT2	1.272	48.10	100.00	2.08	0.90	100.00	0.90	0.90	100.00	0.90	0.90	0.90	0.90	13.19	13.19	
6842 72	11/27/90	240 CEM	1.143	14.70	100.00	4.79	14.80	100.00	2.72	90.50	100.00	1.12	1.12	2.72	2.72	23.72	23.72	
6842 72	08/15/90	217 NT2	1.326	26.90	100.00	4.62	45.70	100.00	2.19	6.00	100.00	0.90	0.90	0.90	0.90	18.65	18.65	
6842 72	11/27/90	217 NT2	1.955	0.80	100.00	0.90	0.90	100.00	0.90	0.90	100.00	0.90	0.90	0.90	0.90	15.89	15.89	
6843 72	11/27/90	340 CEM	1.143	1.60	100.00	3.75	100.00	24.43	9.23	100.00	100.00	0.90	0.90	26.43	26.43	35.21	35.21	
6843 49	08/15/90	216 NT2	1.322	1.51	11.80	20.26	2.59	100.00	14.61	0.90	100.00	0.90	0.90	0.90	0.90	41.27	41.27	
6843 72	11/27/90	340 CEM	1.197	4.50	71.30	14.27	9.18	100.00	18.67	26.50	100.00	1.12	1.12	3.54	3.54	36.17	36.17	
6843 49	08/15/90	203 NT2	1.341	12.80	52.70	4.18	14.30	71.50	4.52	0.90	100.00	0.90	0.90	0.90	0.90	17.84	17.84	
6843 72	11/27/90	320 NT2	0.887	3.20	100.00	31.25	14.30	100.00	7.61	29.50	100.00	3.39	3.39	7.61	7.61	41.81	41.81	
6844 14	11/27/90	340 CEM	1.197	49.50	100.00	2.82	90.90	100.00	1.12	0.90	100.00	1.12	1.12	1.12	1.12	8.85	8.85	
6844 49	08/15/90	202 NT2	1.275	39.80	100.00	2.53	100.00	1.12	0.90	100.00	1.12	1.12	1.12	1.12	13.32	13.32		
6844 72	11/27/90	320 NT2	0.887	15.80	9.15	0.91	31.10	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	14.99	14.99	
6847 74	11/27/90	340 CEM	1.234	0.70	100.00	127.77	3.21	100.00	11.31	46.90	100.00	2.43	2.43	31.11	31.11	57.16	57.16	
6847 49	08/15/90	202 NT2	1.275	15.80	100.00	4.32	31.40	100.00	2.97	89.40	100.00	1.12	1.12	2.97	2.97	21.80	21.80	
6847 74	11/27/90	320 NT2	0.887	1.80	100.00	12.30	12.30	100.00	0.91	20.10	100.00	3.44	3.44	8.11	8.11	52.59	52.59	
7207 72	09/25/90	206 CEM	0.896	5.05	15.80	3.10	6.47	22.07	2.72	0.90	92.30	0.90	0.90	0.90	0.90	7.97	7.97	
7207 72	09/25/90	206 CEM	0.896	6.12	7.85	22.07	6.47	12.80	7.84	0.90	49.10	0.90	0.90	0.90	0.90	27.15	27.15	
7207 72	09/25/90	212 NT2	1.052	0.80	5.82	0.90	0.90	0.90	0.43	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
7207 72	12/04/90	345 NT2	0.718	1.40	26.10	17.20	2.14	55.40	25.91	0.90	100.00	0.90	0.90	0.90	0.90	11.29	26.96	
7208 72	09/25/90	238 CEM	0.896	1.60	4.70	4.70	2.73	7.81	2.87	0.90	26.40	0.90	1.75	1.75	1.75	11.17	11.17	
7208 72	12/04/90	349 CEM	0.896	6.32	6.20	0.43	0.43	4.76	20.34	1.70	36.30	0.90	0.90	0.90	0.90	3.82	3.82	
7208 72	12/04/90	345 NT2	1.052	0.80	2.43	0.90	0.90	0.90	4.76	0.90	17.30	0.90	0.90	0.90	0.90	30.35	30.35	
7208 72	12/04/90	345 NT2	0.718	0.43	12.20	36.46	0.90	19.00	32.51	2.17	51.20	0.90	0.90	0.90	0.90	26.87	26.87	
7208 72	09/25/90	201 CEM	1.144	42.60	5.80	0.42	97.30	100.00	1.03	0.90	100.00	0.90	0.90	0.90	0.90	0.90	0.90	
7208 72	09/25/90	202 CEM	1.081	44.70	100.00	1.63	0.90	100.00	0.90	0.90	100.00	0.90	0.90	0.90	0.90	11.29	11.29	
7201 72	09/25/90	274 CEM	1.025	26.80	6.75	0.66	82.80	100.00	1.22	0.90	100.00	0.90	0.90	0.90	0.90	5.66	5.66	
7201 72	09/25/90	244 CEM	0.944	17.80	40.80	20.13	34.80	40.80	11.37	0.90	100.00	0.90	0.90	0.90	0.90	24.57	24.57	
7201 72	09/25/90	259 NT2	1.027	0.80	4.30	0.66	0.90	91.10	0.90	0.90	100.00	0.90	0.90	0.90	0.90	7.41	7.41	
7205 72	09/24/90	204 CEM	0.432	0.12	54.10	107.44	2.14	100.00	39.90	0.90	100.00	0.90	0.90	0.90	0.90	21.89	21.89	
7205 72	11/20/90	347 CEM	0.903	2.90	100.00	33.53	14.00	100.00	7.13	0.90	97.30	0.90	0.90	0.90	0.90	33.59	33.59	
7205 72	12/06/90	340 CEM	0.573	0.00	40.20	0.00	0.00	40.70	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
7205 72	01/04/91	340 CEM	1.235	1.97	100.00	25.20	6.70	100.00	16.73	0.00	100.00	0.00	0.00	0.00	0.00	30.32	30.32	
7205 72	09/26/90	201 NT2	0.828	4.17	44.50	11.65	11.65	14.40	7.84	0.00	100.00	0.00	0.00	0.00	0.00	4.11	23.01	
7205 72	10/26/90	343 NT2	0.818	1.24	100.00	7.20	4.44	100.00	22.54	0.00	100.00	0.00	0.00	0.00	0.00	22.54	22.54	
7205 72	10/06/90	344 NT2	0.441	0.00	40.80	0.00	0.00	89.80	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.12	0.12	
7206 72	09/26/90	264 CEM	0.632	34.30	100.00	2.92	40.40	100.00	1.45	0.90	100.00	0.90	0.90	0.90	0.90	21.16	21.16	
7206 72	09/26/90	202 NT2	0.026	0.00	100.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.40	0.40	
7207 72	10/02/90	204 CEM	0.449	0.00	100.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.52	0.52	
7207 72	10/02/90	204 NT2	0.712	3.59	100.00	27.80	4.80	100.00	2.14	0.00	100.00	0.00	0.00	0.00	0.00	2.14	51.54	











Am.	Ship	Loc.	Port	Cell	Dist.	IC 25	IC 25	AI 25	IC 50	IC 50	AI 50	IC 95	IC 95	AI 95	IC 95	AI 95	IC 95	AI 95	
8245	75	12/20/90	310 CEN	1.391	0.80	7.92	6.98	6.98	11.30	8.88	8.88	91.30	9.88	9.88	9.88	9.88	9.88	9.88	
8246	75	81/17/91	301 CEN	0.474	0.92	49.50	5.55	27.10	67.10	2.47	0.00	96.40	0.00	0.00	1.43	1.43	1.43	1.43	1.43
8246	75	81/17/91	303 M12	1.182	0.90	15.20	0.00	0.00	21.10	0.00	0.00	31.80	0.00	0.00	0.00	0.00	0.00	0.00	
8247	75	12/20/90	317 CEN	1.529	141.80	1.30	0.02	0.00	443.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
8247	75	81/17/91	301 CEN	0.418	0.57	100.50	> 175.70	100.00	100.00	1.00	0.00	100.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00
8247	75	81/17/91	304 M12	1.093	0.70	54.70	0.61	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
8253	75	12/20/90	311 CEN	1.397	0.00	64.00	0.00	0.00	424.00	0.00	0.00	942.00	0.00	0.00	0.00	0.00	0.00	0.00	
8253	75	81/17/91	304 CEN	0.378	< 1.057	0.32	0.00	0.00	312.50	5.64	100.00	17.40	0.00	100.00	0.00	0.00	17.40	0.00	
8253	75	81/17/91	304 M12	1.057	0.00	100.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
8257	75	12/20/90	317 CEN	1.397	142.00	434.00	4.23	159.00	160.00	0.00	6.20	0.00	160.00	0.00	0.00	1.93	21.04	47.07	
8257	75	81/17/91	301 CEN	0.378	< 0.32	100.00	> 312.50	12.70	100.00	7.30	47.10	100.00	2.00	100.00	0.00	0.00	7.30	0.00	
8257	75	81/17/91	304 M12	1.057	0.00	100.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
8257	75	12/20/90	310 CEN	1.393	3.20	464.00	171.37	15.70	100.00	0.00	43.75	81.20	0.00	12.50	35.30	48.17	48.17		
8257	75	81/17/91	302 CEN	0.542	14.00	0.13	0.01	25.50	0.25	0.01	86.10	0.00	0.00	1.14	0.00	15.44	0.00		
8257	75	81/17/91	304 M12	1.076	15.60	> 100.00	0.42	51.10	100.00	0.00	3.21	89.00	0.00	1.12	1.21	20.82	0.00		
8258	75	12/20/90	310 CEN	1.393	25.00	> 1000.0	0.00	159.80	1000.00	0.00	0.42	1866.0	0.00	0.00	0.42	15.27	15.27		
8258	75	81/17/91	302 CEN	0.542	44.00	100.00	2.19	67.70	100.00	0.00	1.48	0.00	100.00	0.00	0.00	1.48	0.00		
8258	75	81/17/91	304 M12	1.076	41.70	> 100.00	2.79	81.40	100.00	0.00	1.20	67.00	0.00	0.00	1.20	0.00	0.00		
8259	75	12/20/90	317 CEN	1.147	1.70	1000.0	0.00	864.76	87.77	1000.00	0.00	120.91	26.00	0.00	35.67	120.91	71.07		
8259	75	81/17/91	301 CEN	0.342	11.40	100.00	0.42	16.30	100.00	0.00	4.15	29.90	0.00	1.34	4.15	32.76	0.00		
8259	75	81/17/91	304 M12	1.069	11.50	> 100.00	0.43	16.80	100.00	0.00	4.25	29.90	0.00	3.35	4.25	34.17	0.00		
8260	75	12/20/90	317 CEN	1.147	3.20	1000.0	0.00	312.50	11.40	1000.00	0.00	87.88	56.40	0.00	17.40	87.88	75.77		
8260	75	81/17/91	302 CEN	0.542	11.20	100.00	0.84	15.90	100.00	0.00	4.30	29.80	0.00	1.35	4.30	29.51	0.00		
8260	75	81/17/91	304 M12	1.069	5.90	> 100.00	0.84	16.70	100.00	0.00	5.11	29.10	0.00	3.44	5.11	37.24	0.00		
8261	75	12/20/90	317 CEN	1.140	3.61	197.00	33.11	5.95	263.00	47.45	25.10	1000.00	0.00	20.82	32.25	55.11	55.11		
8261	75	81/17/91	301 CEN	0.317	11.40	> 100.00	0.42	16.30	100.00	0.00	4.15	29.90	0.00	1.34	4.15	31.90	0.00		
8261	75	81/17/91	304 M12	1.064	10.60	100.00	10.00	14.70	100.00	0.00	4.79	29.60	0.00	3.36	4.79	31.10	0.00		
8262	75	12/20/90	310 CEN	1.140	28.00	149.00	6.44	90.20	409.00	0.00	4.53	0.00	100.00	0.00	0.00	1.87	15.15		
8262	75	81/17/91	302 CEN	0.517	44.00	> 100.00	2.14	86.10	100.00	0.00	1.13	6.00	0.00	1.13	4.63	4.63	0.00		
8262	75	81/17/91	304 M12	1.004	0.00	87.10	6.08	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
8272	75	81/17/91	306 CEN	1.152	26.40	100.00	0.00	90.30	100.00	0.00	1.97	0.00	100.00	0.00	0.00	0.00	0.00		
8272	75	81/17/91	304 M12	1.048	12.40	> 100.00	0.07	19.40	100.00	0.00	5.14	77.20	0.00	1.34	5.14	24.31	0.00		
8300	234	11/07/90	211 CEN	1.342	6.04	10.00	1.65	17.10	100.00	0.00	8.26	0.00	100.00	0.00	0.00	0.00	0.00		
8300	234	11/07/90	211 CEN	1.342	0.00	6.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
8300	234	10/26/90	209 M12	0.199	0.37	47.80	91.20	1.48	67.40	40.30	30.40	100.00	0.00	0.00	0.00	20.51	44.65	0.00	
8300	234	10/26/90	209 M12	0.799	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8311	75	01/18/91	301 CEN	1.214	21.80	> 100.00	4.14	30.70	100.00	0.00	1.97	0.00	100.00	0.00	0.00	1.97	0.72		
8311	75	01/18/91	302 M12	1.347	0.00	37.40	0.00	0.00	60.10	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
8326	75	01/18/91	300 CEN	1.125	10.90	83.50	7.44	33.20	100.00	0.00	3.02	0.00	100.00	0.00	0.00	2.32	25.39		
8326	75	01/18/91	304 M12	1.194	11.50	> 100.00	0.81	21.40	100.00	0.00	4.44	64.40	0.00	1.13	4.44	26.65	0.00		
8334	75	02/21/91	406 CEN	0.451	1.47	7.65	5.04	26.50	51.60	0.00	1.81	0.00	100.00	0.00	0.00	0.26	10.63		
8334	75	02/21/91	402 M12	1.252	1.54	100.00	44.87	5.41	100.00	0.00	17.81	57.10	0.00	1.74	17.81	45.47	0.00		

Age	Sex	Test Date	RT	Cell	C174	IC 25	AI 25	IC 50	AI 50	IC 75	AI 75	IC 95	AI 95	SI	TAI	
6335	F	6/2/21/91 400 CEM	0.851	43.80	93.80	2.14	71.40	100.00	1.40	0.00	100.00	0.00	1.31	3.55		
6335	F	6/2/21/91 402 RT2	1.752	4.20	1.80	8.24	6.43	100.00	15.34	25.10	100.00	5.88	0.16	37.82		
6336	F	6/2/21/91 403 CEM	0.807	6.60	35.80	6.06	57.50	9.86	0.00	100.00	0.00	0.00	0.00	0.00	0.00	
6336	F	6/2/21/91 403 RT2	1.130	17.40	100.00	5.73	45.20	100.00	2.21	6.00	100.00	0.00	2.21	14.28		
6339	F	6/2/21/91 401 CEM	0.709	94.50	100.00	1.06	6.00	100.00	9.00	0.00	100.00	0.00	0.00	0.00	0.00	
6339	F	6/2/21/91 404 RT2	1.193	32.00	100.00	3.13	44.80	100.00	2.14	2.14	100.00	1.00	2.14	19.13		
6344	F	6/1/18/91 300 CEM	0.946	17.90	21.20	1.19	32.00	35.40	1.11	0.00	100.00	0.00	0.46	0.40		
6344	F	6/1/18/91 300 RT2	0.944	6.00	100.00	0.00	6.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	
6344	F	6/1/18/91 300 CEM	1.022	1.50	100.00	0.00	64.43	5.71	100.00	17.32	63.20	100.00	1.54	17.52	44.40	
6344	F	6/1/18/91 300 RT2	1.212	6.54	64.80	16.29	7.18	100.00	13.92	30.70	100.00	3.26	9.82	35.84		
6370	F	6/1/18/91 307 CEM	1.049	34.10	100.00	2.93	36.40	100.00	1.71	0.00	100.00	0.00	0.00	0.00	0.00	
6370	F	6/1/18/91 307 RT2	0.913	8.00	91.90	0.00	6.00	69.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	
6372	F	6/2/05/91 404 CEM	1.328	36.80	70.40	2.11	61.40	100.00	1.43	0.00	100.00	0.00	0.00	0.00	0.00	
6372	F	6/2/05/91 404 RT2	1.127	18.50	100.00	5.44	45.30	100.00	2.31	0.00	100.00	0.00	0.00	0.00	0.00	
6375	F	6/2/05/91 408 CEM	1.308	2.65	100.00	0.00	35.27	11.10	100.00	9.82	100.00	1.00	0.00	0.00	0.00	
6375	F	6/2/05/91 408 RT2	1.080	5.40	74.90	22.02	5.00	100.00	20.00	10.00	100.00	10.00	14.90	44.86		
6380	F	6/2/05/91 490 CEM	1.287	13.50	21.00	1.34	21.40	100.00	4.63	0.00	100.00	0.00	0.00	0.00	0.00	
6380	F	6/2/05/91 490 RT2	1.105	1.51	57.20	10.77	11.10	100.00	9.00	28.80	100.00	3.47	5.14	29.95		
6382	F	6/2/05/91 499 CEM	1.207	8.80	100.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	1.10		
6382	F	6/2/05/91 499 RT2	1.157	13.50	100.00	7.43	31.00	100.00	3.23	0.00	100.00	0.00	0.00	0.00	0.00	
6384	F	6/2/05/91 499 CEM	1.193	8.00	100.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	
6384	F	6/2/05/91 499 RT2	0.907	17.90	100.00	5.59	72.20	100.00	1.34	0.00	100.00	0.00	0.00	0.00	0.00	
6397	F	6/2/05/91 641 CEM	0.900	20.80	100.00	1.97	100.00	1.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	
6397	F	6/2/05/91 641 RT2	1.044	6.30	50.50	0.00	0.00	72.50	0.00	0.00	100.00	0.00	0.00	0.00	0.00	
6413	F	12/11/90 309 CEM	1.252	2.26	100.00	0.00	44.30	14.70	100.00	4.79	6.00	100.00	0.00	0.00	0.00	0.00
6413	F	12/11/90 309 CEM	1.477	107.00	96.00	9.05	6.00	100.00	3.80	0.00	100.00	0.00	0.00	0.00	0.00	
6413	F	12/11/90 309 RT2	0.946	4.10	100.00	21.86	54.80	100.00	1.44	0.00	100.00	0.00	0.00	0.00	0.00	
6414	F	12/11/90 304 CEM	1.176	22.30	100.00	4.44	64.40	100.00	1.51	0.00	100.00	0.00	0.00	0.00	0.00	
6414	F	12/11/90 304 RT2	1.215	26.40	100.00	37.8%	56.00	100.00	1.83	0.00	100.00	0.00	0.00	0.00	0.00	
6414	F	12/11/90 304 RT2	0.977	1.00	100.00	2.11	2.11	100.00	47.44	0.00	100.00	0.00	0.00	0.00	0.00	
6414	F	12/11/90 308 CEM	1.271	8.50	2.74	0.32	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	
6414	F	12/11/90 308 RT2	1.024	1.30	100.00	72.36	16.10	100.00	7.09	0.00	100.00	0.00	0.00	0.00	0.00	
6417	F	12/11/90 308 CEM	1.271	16.40	0.18	0.01	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	
6417	F	12/11/90 308 RT2	1.024	1.63	100.00	46.12	37.70	100.00	2.64	0.00	100.00	0.00	0.00	0.00	0.00	
6440	F	12/12/90 309 CEM	1.248	0.80	29.40	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	
6440	F	12/12/90 309 RT2	1.092	1.21	27.20	22.40	1.44	50.80	30.31	3.00	97.90	32.44	16.21	21.76		
6441	F	12/12/90 309 CEM	1.248	0.80	0.23	0.00	0.00	77.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	
6441	F	12/12/90 309 RT2	1.092	4.49	100.00	22.30	6.34	100.00	15.69	23.20	100.00	4.32	47.44	54.02		
6444	F	12/12/90 308 CEM	1.270	0.00	100.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	
6444	F	12/12/90 308 RT2	1.069	39.50	100.00	2.53	53.80	100.00	1.84	64.00	100.00	1.04	1.04	1.04	10.72	

AVG No.	Shipt- ment	Test Date	Pit #	Call	0191-	IC 25	IC 25	AI 25	IC 50	IC 50	AI 50	IC 90	IC 90	AI 90	IC 95	IC 95	AI 95	AI	TAI	C	
8449	75	12/13/90	349	CEM	1.275	51.60	0.31	0.01	100.00	>	100.00	>	1.00	0.00	100.00	>	100.00	>	0.00	0.00	7.06
8449	75	12/13/90	305	CEM	1.074	11.00	>	100.00	>	9.08	24.70	>	100.00	>	4.05	97.00	>	100.00	>	4.05	4.05
8452	75	12/13/90	349	CEM	1.340	4.72	40.10	12.76	9.44	87.40	9.44	0.00	100.00	>	100.00	0.00	6.36	26.39	>	10.92	
8452	75	12/13/90	349	CEM	1.203	5.33	49.20	9.22	15.20	66.30	4.36	0.00	97.30	>	97.30	0.00	3.23	18.42	>	18.42	
8453	75	12/13/90	349	CEM	1.340	11.10	26.10	2.35	0.00	49.30	0.00	0.00	64.30	>	64.30	0.00	0.00	0.00	0.00	7.19	
8453	75	12/13/90	349	CEM	1.203	6.45	48.50	7.52	16.70	63.70	3.93	0.00	96.40	>	96.40	0.00	2.90	2.90	>	18.42	
8457	75	12/13/90	363	CEM	1.357	44.50	>	100.00	>	2.25	44.70	>	100.00	>	1.54	0.00	100.00	>	1.54	8.18	
8457	75	12/13/90	363	CEM	1.094	0.00	17.50	0.00	0.00	26.80	0.00	0.00	94.00	>	94.00	0.00	0.00	0.00	0.00	0.00	
8501	76	02/08/91	448	CEM	1.074	0.00	15.50	0.00	0.00	21.00	0.00	0.00	30.90	>	30.90	0.00	0.00	0.00	0.00	0.70	
8501	76	02/08/91	448	CEM	1.333	15.10	19.20	1.27	25.50	29.20	1.15	0.00	100.00	>	100.00	0.00	0.75	0.75	>	3.29	
8505	76	02/08/91	448	CEM	1.267	17.10	36.30	2.12	0.00	100.00	0.00	0.00	100.00	>	100.00	0.00	0.00	0.00	0.00	4.19	
8505	76	02/08/91	448	CEM	1.335	2.44	>	100.00	>	40.73	12.00	>	100.00	>	0.35	0.00	100.00	>	8.35	>	28.81
8514	76	02/08/91	448	CEM	1.016	7.79	>	100.00	>	12.63	15.00	>	100.00	>	6.69	0.00	100.00	>	6.69	6.69	
8514	76	02/08/91	448	CEM	1.309	1.58	12.20	7.71	6.42	22.90	3.57	0.00	100.00	>	100.00	0.00	1.89	1.89	>	14.15	
8519	76	02/08/91	448	CEM	0.887	17.90	>	100.00	>	5.39	19.90	>	100.00	>	2.51	91.20	>	100.00	>	1.10	2.51
8519	76	02/08/91	448	CEM	1.287	2.11	>	100.00	>	47.43	7.39	>	100.00	>	13.53	70.70	>	100.00	>	1.41	13.53
8555	76	01/09/91	348	CEM	0.769	32.00	>	100.00	>	3.13	100.00	>	100.00	>	1.00	0.00	100.00	>	1.00	1.00	
8555	76	01/09/91	318	CEM	1.373	6.00	45.30	0.00	0.00	100.00	>	100.00	>	0.00	0.00	100.00	>	0.00	0.00	0.13	
8645	76	01/31/91	448	CEM	0.944	24.10	>	100.00	>	3.83	44.80	>	100.00	>	2.23	92.10	>	100.00	>	1.86	2.23
8645	76	01/31/91	448	CEM	1.444	0.00	>	100.00	>	0.00	0.00	>	100.00	>	0.00	0.00	100.00	>	0.00	0.00	1.39
8701	76	01/31/91	498	CEM	0.794	0.32	>	100.00	>	312.50	0.32	>	100.00	>	312.50	>	0.80	100.00	>	125.59	312.50
8701	76	01/31/91	448	CEM	1.423	0.32	>	100.00	>	312.50	0.32	>	100.00	>	312.50	>	0.32	100.00	>	312.50	312.50
8702	76	01/31/91	498	CEM	0.794	0.32	>	100.00	>	312.50	0.32	>	100.00	>	312.50	>	0.61	100.00	>	123.49	312.50
8702	76	01/31/91	448	CEM	1.423	0.32	>	100.00	>	312.50	0.32	>	100.00	>	312.50	>	0.39	100.00	>	254.45	312.50
8719	27A	01/21/91	302	CEM	0.904	3.07	>	100.00	>	32.33	27.10	>	100.00	>	2.49	0.00	100.00	>	100.00	>	3.49
8719	27A	02/21/91	408	CEM	0.833	69.10	403.00	5.83	0.00	610.00	0.00	0.00	943.00	>	943.00	0.00	0.00	0.00	0.00	0.00	
8719	27A	01/21/91	309	CEM	1.383	1.35	>	100.00	>	73.97	2.32	>	100.00	>	43.17	38.70	>	100.00	>	2.38	43.17
8720	27A	01/21/91	302	CEM	0.904	1.70	>	100.00	>	34.94	4.25	>	100.00	>	23.50	16.90	>	100.00	>	5.30	23.50
8720	27A	02/21/91	408	CEM	0.833	4.57	67.40	14.76	4.52	109.00	16.63	25.00	303.00	>	303.00	12.69	12.69	12.69	12.69	34.53	
8722	27A	01/21/91	340	CEM	0.970	7.98	45.90	5.77	22.40	47.70	3.00	0.00	100.00	>	100.00	0.00	2.52	2.52	>	11.42	
8722	27A	02/21/91	409	CEM	0.911	16.60	>	100.00	>	4.92	39.50	>	100.00	>	2.52	100.00	>	100.00	>	0.00	0.00
8724	27A	01/21/91	346	CEM	1.093	0.32	85.00	259.34	3.20	100.00	>	11.25	0.00	100.00	>	100.00	>	0.00	0.00	25.94	
8724	27A	01/21/91	300	CEM	1.309	0.00	>	100.00	>	0.00	0.00	>	100.00	>	0.00	0.00	0.00	0.00	2.50		

AVS No.	Ship- ment Date	Test Pit	# Cells	Diff.	IC 25	IC 25	AI 25	IC 50	IC 50	AI 50	IC 95	IC 95	AI 95	SI	TAI			
					0.00	>	100.00	0.00	>	100.00	0.00	>	100.00	0.00	>	100.00		
8765	27A	01/22/91	42P CEM	0.707	0.00	>	100.00	0.00	>	100.00	0.00	>	100.00	0.00	>	100.00		
8765	27A	02/21/91	40P CEM	0.911	0.00	>	206.00	0.00	>	471.00	0.00	>	947.00	0.00	>	947.00		
8765	27A	01/22/91	44S M12	1.203	<	0.32	>	100.00	>	312.50	<	0.32	>	100.00	>	312.50	>	96.81
8765	27A	02/21/91	44Z M12	0.644	0.00	>	100.00	0.00	>	100.00	0.00	>	100.00	0.00	>	100.00		
8772	27A	01/22/91	42H CEM	0.634	0.00	>	100.00	0.00	>	100.00	0.00	>	100.00	0.00	>	100.00		
8772	27A	02/21/91	40A CEM	0.901	0.00	>	115.00	0.00	>	423.00	0.00	>	942.00	0.00	>	942.00		
8772	27A	01/22/91	44A M12	1.131	<	0.32	>	100.00	>	312.50	<	0.32	>	100.00	>	312.50	>	92.11
8772	27A	02/21/91	40D M12	1.272	0.00	>	100.00	0.00	>	100.00	0.00	>	100.00	0.00	>	100.00		
8815	27A	02/21/91	40A CEM	0.760	16.40	97.00	5.91	28.10	>	3.56	0.00	>	100.00	0.00	>	100.00		
8815	27A	01/22/91	44V M12	1.020	5.80	64.60	11.14	12.10	>	7.75	28.20	>	100.00	0.00	>	100.00		
8815	27A	02/21/91	40D M12	1.272	22.30	>	100.00	>	4.48	42.20	>	100.00	>	2.37	>	100.00		
8849	27A	02/21/91	40C CEM	0.759	20.70	1.00	0.05	100.00	>	1.00	0.00	>	100.00	0.00	>	100.00		
8849	27A	01/22/91	45C M12	0.924	34.00	>	100.00	>	2.94	73.50	>	100.00	>	1.36	>	100.00		
8849	27A	02/21/91	40J M12	1.363	49.70	>	173.00	>	3.48	0.70	>	250.00	0.00	>	274.00			
8855	27A	01/23/91	45D CEM	1.121	35.90	77.30	2.28	69.10	>	190.00	>	1.45	0.00	>	100.00			
8855	27A	01/23/91	32X M12	1.375	0.00	0.17	0.00	0.00	>	93.80	0.00	>	100.00	0.00	>	100.00		
8887	27A	01/23/91	40A CEM	0.852	0.00	>	21.40	0.00	>	44.00	0.00	>	94.40	0.00	>	100.00		
8887	27A	01/23/91	40D M12	1.094	<	0.32	5.47	>	17.04	<	0.12	>	29.30	>	91.41	>	174.70	
8887	27A	02/21/91	40J M12	1.363	0.00	>	3.22	0.00	>	5.87	0.00	>	59.10	0.00	>	100.00		
9011	27A	01/24/91	32E CEM	0.790	0.52	27.70	53.49	0.64	>	100.00	>	110.98	0.00	>	100.00			
9011	27A	01/24/91	30Z M12	1.003	0.00	>	100.00	0.00	>	100.00	0.00	>	100.00	0.00	>	100.00		
9016	27A	01/24/91	34G CEM	0.874	0.32	>	100.00	>	312.50	<	0.32	>	100.00	>	312.50	>	10.44	
9016	27A	02/21/91	40E CEM	0.854	0.00	0.70	0.00	0.00	>	100.00	0.00	>	100.00	0.00	>	100.00		
9016	27A	01/24/91	34J M12	1.044	0.00	>	100.00	0.00	>	100.00	0.00	>	100.00	0.00	>	100.00		
9024	27A	01/24/91	38K CEM	0.928	2.11	12.10	5.75	4.91	>	18.70	5.80	>	30.70	0.00	>	2.44		
9024	27A	02/21/91	40F CEM	0.654	0.00	16.40	6.01	0.00	>	23.80	0.00	>	63.00	0.00	>	1.43		
9024	27A	01/24/91	34S M12	1.061	0.00	5.78	0.00	0.00	>	9.18	0.00	>	29.00	0.00	>	1.04		
9026	27A	01/24/91	38L CEM	0.866	0.40	4.90	12.39	0.77	6.60	0.60	0.00	>	9.64	0.00	>	6.39		
9026	27A	01/24/91	34S M12	1.174	0.70	1.48	0.00	0.00	>	2.67	0.00	>	9.13	0.00	>	0.00		
9446	25A	12/20/90	36J CEM	1.235	<	0.32	76.50	>	232.81	<	0.32	>	100.00	>	312.50	>	232.81	
9446	25A	01/04/91	38W CEM	1.273	1.04	>	10.00	>	9.61	2.04	>	10.00	>	3.52	>	10.00		
9446	25A	02/05/91	40Q CEM	1.360	<	3.20	4.00	>	127.50	<	3.20	>	408.00	>	302.50	>	75.22	
9446	25A	02/05/91	40Q CEM	1.360	0.10	>	1.00	>	9.55	0.19	>	1.00	>	5.34	>	23.17		
9446	25A	12/20/90	34K M12	0.653	0.32	23.10	72.17	0.12	81.50	0.32	0.32	>	100.00	>	312.50	>	72.17	
9446	25A	02/05/91	40Q M12	1.110	3.20	64.60	20.20	3.20	151.00	>	47.12	<	5.20	>	206.75	>	44.26	
9446	25A	02/05/91	40S M12	1.110	0.02	1.00	58.63	0.06	>	1.00	>	15.93	>	1.53	>	15.93		
9465	25A	12/20/90	36L CEM	1.263	0.50	0.00	0.00	0.00	>	0.32	0.00	>	0.32	0.00	>	0.00		
9465	25A	01/04/91	38W CEM	1.054	0.00	1.00	0.00	0.00	>	1.00	0.00	>	1.00	0.00	>	5.15		
9465	25A	12/20/90	34L M12	0.660	0.32	0.32	1.00	0.00	>	0.32	0.32	<	1.00	0.00	>	2.61		

The difference in the difference in the cell control and the ventral control cell was 10.6%.

(Viral) inhibitory concentration 50% (IC<sub>50</sub>) = The drug concentration (μg/ml) that inhibited viral CPE by 50%,  $\text{IC}_{50}$  or EC<sub>50</sub> calculated by using a regression analysis for serial dilution testing.

(Cell) toxicity concentration 50% (TC<sub>50</sub>) and IC<sub>50</sub> = The drug concentration (ug/ml) that reduced cell viability by 50%.

Antiviral Index = a single point ratio of the antiviral and anticellular effect of the compound, calculated with IC<sub>50</sub>, 50% or 95% reduction volume (calculator by dividing the IC<sub>50</sub> by the IC<sub>50</sub> 50%).

Selectivity index = A ratio calculated by dividing the TC by the TC<sub>0.50</sub> (based upon & one half log<sub>10</sub> dilutions), said, the x-axis scale is 0-320.

**Activity - A** On a graph that produces XY rotation in Fig. 1, draw a horizontal line at  $y = 0.005$ .

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## **APPENDIX C**

**List of Confirmed Actives Against HIV from the Primary Screen  
(Includes Testing Done in 1987, 1988, 1989, 1990 and 1991)**

List of Compounds that Demonstrated Confirmed Activity  
In the Primary Screen Against HIV

AVS <u>No.</u>	AVS <u>No.</u>	AVS <u>No.</u>	AVS <u>No.</u>	AVS <u>No.</u>	AVS <u>No.</u>
0094	2657 <sup>F,S</sup>	5186	6200	6947	8235
0206 <sup>F,S</sup>	2708 <sup>F,S</sup>	5360	6201	7207	8236
0598	2760	5691	6202	7208	8237
0702	2921	5733	6203	7241	8256
0703	2922	5767	6207	7295	8257
0709	2955	5871	6208	7701	8258
0999 <sup>F,S</sup>	2996 <sup>F</sup>	5872	6209	7708	8259
1603	3345	5874	6210	7741	8260
1644	3374	5875	6211	7787	8261
1790	3392	5876	6212	7839	8262
1795	3436	5880	6214	7888	8272
1801	3443	5882	6215	7890	8308
1846	3459	5884	6216	7891	8326
1850	3491	5885	6217	7930	8334
2285 <sup>F,S</sup>	3496	5887	6218	7947	8335
2332	3513 <sup>R</sup>	5956	6219	7954	8366
2340 <sup>S</sup>	3592	5996	6220	7960	8372
2353 <sup>F,S</sup>	3819	6174	6221	7961	8375
2358 <sup>F,S</sup>	3939 <sup>R</sup>	6175	6222	7962	8380
2365	4032	6176	6223	7963	8433
2393 <sup>F,S</sup>	4035	6180	6224	7973	8434
2397 <sup>F</sup>	4036	6183	6225	7974	8482
2445 <sup>F,S</sup>	4075	6184	6227	7975	8514
2448 <sup>F,S</sup>	4138	6185	6230	7976	8519
2572	4139	6186	6289	7977	8520
2573	4142	6187	6293	7980	8701
2574 <sup>F,S</sup>	4357	6188	6295	7983	8702
2575	4397	6191	6446	7987	8719
2576 <sup>S</sup>	4446	6192	6510	7989	8720
2581	4593	6193	6511	8041	8722
2582	4611	6194	6512	8137	8815
2585 <sup>F</sup>	4730	6195	6777	8141	8849
2589	4923	6196	6942	8201	9464
2600	5024	6197	6943	8209	9466
2629 <sup>F,S</sup>	5025	6198	6945	8225	
2639	5121	6199	6946	8234	

<sup>F</sup> Secondary testing done on FAIDS virus.

<sup>S</sup> Secondary testing done on SAIDS virus.

<sup>R</sup> Secondary testing done on Rauscher - Murine Leukemia Virus (RMuLV).